Appendix A
List of Recipients

APPENDIX A

List of Recipients

The following is a list of agencies, organizations, and persons to whom electronic copies of the Supplemental Draft EIS were sent. Copies of the Supplemental Draft EIS were sent out to other interested businesses, individuals, and organizations, as requested.

Federal Agencies

Advisory Council on Historic Preservation

Centers for Disease Control

Federal Emergency Management Agency

United States Federal Highway Administration

United States Federal Railroad Administration

United States Federal Transit Administration

United States Army Corps of Engineers

United States Department of Agriculture, Natural Resources Conservation Science

United States Department of the Army

United States Department of Commerce

United States Department of Energy

United States Department of Homeland Security

United States Department of Housing & Urban Development

United States Department of the Interior, Office of Environmental Policy and Compliance

United States Department of Public Safety

United States Environmental Protection Agency

United States Coast Guard

United States Fish and Wildlife Service

Surface Transportation Board

United States Legislators

Hon. Amy Klobuchar, U.S. Senator

Hon. Al Franken, U.S. Senator

Hon. Eric Paulsen, U.S. Representative (District 3)

Hon. Keith Ellison, U.S. Representative (District 5)

Federal Agencies – Regional Offices

United States Federal Aviation Administration, Great Lakes Regional Office

United States Federal Highway Administration, Minnesota Division

United States Army Corps of Engineers, St. Paul District

United States Coast Guard, Ninth Coast Guard District

United States Department of Housing and Urban Development, Region V

United States Federal Railroad Administration, Region IV

United States Federal Transit Administration, Region V

United States Environmental Protection Agency, Region V

State Agencies

Minnesota Board of Water and Soil Resources

Minnesota Department of Agriculture

Minnesota Department of Commerce

Minnesota Department of Health

Minnesota Department of Natural Resources

Minnesota Department of Public Safety

Minnesota Department of Transportation

Minnesota Environmental Quality Board

Minnesota Historical Society

Minnesota Indian Affairs Council

Minnesota Office of the State Archaeologist

Minnesota Pollution Control Agency

Minnesota State Historic Preservation Office

State Elected Officials

Hon. Mark Dayton, Governor

Hon. Terri Bonoff, Minnesota State Senator (District 44)

Hon. Ron Latz, Minnesota State Senator (District 46)

Hon. David Hann, Minnesota State Senator (District 48)

Hon. Melisa Franzen, Minnesota State Senator (District 49)

Hon. Bobby Joe Champion, Minnesota State Senator (District 59)

Hon. Kari Dziedzic, Minnesota State Senator (District 60)

Hon. Scott Dibble, Minnesota State Senator (District 61)

Hon. Patricia Torres Ray, Minnesota State Senator (District 63)

Hon. Sarah Anderson, Minnesota State Representative (District 44A)

Hon. Jon Applebaum, Minnesota State Representative (District 44B)

Hon. Ryan Winkler, Minnesota State Representative (District 46A)

Hon. Cheryl Youakim, Minnesota State Representative (District 46B)

Hon. Yvonne Selcer, Minnesota State Representative (District 48A)

Hon. Jennifer Loon, Minnesota State Representative (District 48B)

Hon. Ron Erhardt, Minnesota State Representative (District 49A)

Hon. Paul Rosenthal, Minnesota State Representative (District 49B)

Hon. Joe Mullery, Minnesota State Representative (District 59A)

Hon. Raymond Dehn, Minnesota State Representative (District 59B)

Hon. Diane Loeffler, Minnesota State Representative (District 60A)

Hon. Phyllis Kahn, Minnesota State Representative (District 60B)

Hon. Frank Hornstein, Minnesota State Representative (District 61A)

Hon. Paul Thissen, Minnesota State Representative (District 61B)

Hon. Karen Clark, Minnesota State Representative (District 62A)

Hon. Susan Allen, Minnesota State Representative (District 62B)

Hon. Jim Davnie, Minnesota State Representative (District 63A)

Hon. Jean Wagenius, Minnesota State Representative (District 63B)

Local Elected Officials

Hon. Betsy Hodges, Mayor of Minneapolis

Hon. Kevin Reich, Minneapolis City Councilor (Ward 1)

Hon. Cam Gordon, Minneapolis City Councilor (Ward 2)

Hon. Jacob Frey, Minneapolis City Councilor (Ward 3)

Hon. Barbara Johnson, Minneapolis City Council President (Ward 4)

Hon. Blong Yang, Minneapolis City Councilor (Ward 5)

Hon. Abdi Warsame, Minneapolis City Councilor (Ward 6)

Hon. Lisa Goodman, Minneapolis City Councilor (Ward 7)

Hon. Elizabeth Glidden, Minneapolis City Councilor (Ward 8)

Hon. Alondra Cano, Minneapolis City Councilor (Ward 9)

Hon. Lisa Bender, Minneapolis City Councilor (Ward 10)

Hon. John Quincy, Minneapolis City Councilor (Ward 11)

Hon. Andrew Johnson, Minneapolis City Councilor (Ward 12)

Hon. Linea Palmisano, Minneapolis City Councilor (Ward 13)

Hon. Jeff Jacobs, Mayor of St. Louis Park

Hon. Steve Hallfin, St. Louis Park City Councilor (At-Large)

Hon. Jake Spano, St. Louis Park City Councilor (At-Large)

Hon. Susan Sanger, St. Louis Park City Councilor (Ward 1)

Hon. Anne Mavity, St. Louis Park City Councilor (Ward 2)

Hon. Gregg Lindberg, St. Louis Park City Councilor (Ward 3)

Hon. Tim Brausen, St. Louis Park City Councilor (Ward 4)

Hon. Gene Maxwell, Mayor of Hopkins

Hon. Molly Cummings, Hopkins City Councilor

Hon. Jason Gadd, Hopkins City Councilor

Hon. Kristi Halverson, Hopkins City Councilor

Hon. Aaron Kuznia, Hopkins City Councilor

Hon. Terry Schneider, Mayor of Minnetonka

Hon. Dick Allendorf, Minnetonka City Councilor (At-Large)

Hon. Patty Acomb, Minnetonka City Councilor (At-Large)

Hon. Bob Ellingson, Minnetonka City Councilor (Ward 1)

Hon. Tony Wagner, Minnetonka City Councilor (Ward 2)

Hon. Brad Wiersum, Minnetonka City Councilor (Ward 3)

Hon. Tim Bergstedt, Minnetonka City Councilor (Ward 4)

Hon. Nancy Tyra-Lukens, Mayor of Eden Prairie

Hon. Brad Aho, Eden Prairie City Councilor

Hon. Sherry Butcher Wickstrom, Eden Prairie City Councilor

Hon. Ron Case, Eden Prairie City Councilor

Hon. Kathy Nelson, Eden Prairie City Councilor

Hon. Mike Opat, Hennepin County Commissioner (District 1, Chair)

Hon. Linda Higgins, Hennepin County Commissioner (District 2)

Hon. Marion Greene, Hennepin County Commissioner (District 3)

Hon. Peter McLaughlin, Hennepin County Commissioner (District 4)

Hon. Randy Johnson, Hennepin County Commissioner (District 5)

Hon. Jan Callison, Hennepin County Commissioner (District 6)

Hon. Jeff Johnson, Hennepin County Commissioner (District 7)

County Agencies

Hennepin County, Department of Housing, Community Works

Hennepin County, Department of Energy and Environment

Hennepin County, Department of Transportation

Hennepin County, Department of Policy, Planning & Land Management

Hennepin Conservation District

Libraries

Minnesota Legislative Reference Library

Hennepin County Library – Minneapolis Central Branch

Hennepin County Library – Eden Prairie Branch

Hennepin County Library – Minnetonka Branch

Hennepin County Library – Hopkins Branch

Hennepin County Library – St. Louis Park Branch

Hennepin County Library – Franklin Branch

Hennepin County Library – Linden Hills Branch

Hennepin County Library – Sumner Branch

Hennepin County Library – Walker Branch

MnDOT Transportation Library

Metropolitan Council Library

Local Municipalities

City of Eden Prairie

City of Eden Prairie, Heritage Preservation Commission

City of Edina

City of Hopkins

City of Minneapolis

City of Minneapolis, City Planning and Economic Development

City of Minneapolis, Heritage Preservation Commission

City of Minneapolis, Public Works

City of Minnetonka

City of St. Louis Park

Local and Regional Agencies

Bassett Creek Watershed District and Management Organization

Flandreau Santee Sioux

Fort Peck Tribes

Greater Minneapolis BOMA

Kenwood Isles Area Association

Lower Sioux Indian Community Council

Metropolitan Council - Local Planning Assistance

Metropolitan Council - Metro Transit

Metropolitan Council District 3, Jennifer Munt

Metropolitan Council District 6, James Brimeyer

Metropolitan Council District 7, Gary Cunningham

Metropolitan Council District 8, Adam Duininck

Minneapolis Parks and Recreation Board

Minneapolis Regional Chamber of Commerce

Minnehaha Creek Watershed District

Mississippi Watershed Management Organization

Nine Mile Creek Watershed District

Prairie Island Indian Community

Riley/Purgatory/Bluff Creek Watershed District

Santee Sioux Nation

Shakopee Mdewakanton Sioux Community

Sisseton-Wahpeton

Sisseton-Wahpeton Oyate

Southwest LRT Project Office

Spirit Lake Nation

Three Rivers Park District

Turtle Mountain

Upper Sioux Indian Community

Other

Burlington Northern Santa Fe Railroad

Canadian Pacific Railroad

Twin Cities & Western Railroad

Appendix B
List of Preparers

APPENDIX B

List of Preparers

United States Department of Transportation - Federal Transit Administration

- Maya Sarna, Washington, DC
- Ben Owen, Washington, DC
- Michelle Hershman, Washington, DC
- Sheila Clements, Region V
- Kathryn Loster, Region V
- Cyrell McLemore, Region V
- Bill Wheeler, Region V

Metropolitan Council

Name	Role	Education
Nani Jacobson	Assistant Director, Environmental & Agreements	B.S., Biology, Virginia Polytechnic Institute & State University, 1997 M.S., Environmental Sciences & Policy, Johns Hopkins University, 2010
Craig Lamothe, AICP	Acting Project Director	B.A., Government, St. Lawrence University, 1996 Master of Planning, University of Minnesota, 2001 American Institute of Certified Planners (AICP), 2002
Jim Alexander, PE	Director, Design & Engineering	B.S., Civil Engineering, University of Wyoming, 1988 M.S., Geotechnical Engineering, University of Washington, 1995
Tom Domres, PE, NCEES	Manager, Engineering	B.S, Civil Engineering, University of Minnesota, 1997
Ryan Kronzer, AIA, LEED, AP	Manager, Design	BA, Architecture, University of Minnesota, 1997 Masters of Architecture, University of Minnesota, 2000
Robin Caufman	Assistant Director, Administration, Public Involvement & Communications	B.S. Environmental Studies, University of Minnesota College of Natural Resources, 1994 Master of Urban and Regional Planning, University of Minnesota, Humphrey Institute, 2001
Sam O'Connell, AICP	Manager, Public Involvement	B.S. Geography, Minnesota State University Mankato, 2010
Melanie Steinborn	Assistant Director, Project Controls/ Budget-Grants/ROW-Permits	B.S., Mechanical Engineering, University of Minnesota, 2001 M.S., Technology Management, University of St. Thomas, 2006
Caroline Miller	Environmental Specialist	B.A., Anthropology, Hamilton College, 2009 Master of Urban and Regional Planning, University of Minnesota, Humphrey Institute, 2014

Minnesota Department of Transportation

Name	Role	Education
James DeLuca	Environmental Mitigation Specialist, Hazardous and Contaminated Materials	B.S., Geology, University of Wisconsin-Madison, 1982 M.S., Geology, Virginia Polytechnic Institute & State University, 1986
Greg Mathis	Cultural Resource Specialist, SHPO Coordination	B.A., Geography, University of Nebraska – Lincoln, 1994 M.C.R.P, Community and Regional Planning, University of Nebraska – Lincoln, 2000

Aaron Tag	Manager, ROW/Permits	B.S., Civil Engineering, University of Minnesota – Twin Cities, 2004

Consultants

Name	Role	Education
CH2M HILL		
Karin Lilienbecker	Project Manager	M.S., Biology, University of San Francisco, 1999 B.S., Environmental Science, University of San Francisco, 1993
Mary Gute, AICP	Deputy Project Manager	M.S., Urban and Regional Planning, University of Iowa, 2001 M.P.A., Public Administration, Southwest Texas State University, 1999 B.S., Anthropology/Environmental Studies, Iowa State University, 1994
Rob Rodland, AICP	Socioeconomics, Environmental Justice	B.A., Geography, University of Washington, 2000
Dan Dupies	Environmental Documentation	Master of Urban Planning, University of Wisconsin at Milwaukee, 1982 B. S. Political Science, University of Wisconsin at Stevens Point, 1980
Nikki Farrington	Transportation and Traffic	B.S. Civil Engineering, University of Minnesota, 2001
Tom Priestley	Visual Quality and Aesthetics	Ph.D., Environmental Planning, Department of Landscape Architecture, University of California, Berkeley, 1988 M.C.P., City Planning, Department of City and Regional Planning, University of California, Berkeley, 1976 M.L.A., Environmental Planning, Department of Landscape Architecture, University of California, Berkeley, 1974 B.U.P., Urban Planning, Department of Urban and Regional Planning, University of Illinois, 1969
Michael Hoffman	Parks and Recreation Areas, Section 4(f)	Master of Urban and Regional Planning, Portland State University, 2004 B.A., English, Binghamton University, 1993
Theresa Campbell	Editing and Document Processing	M.A., Mass Communication, Journalism and Communication, University of Florida, 2013 B.A., English, Journalism and Communication, University of Florida, 2008
Jason Reynolds	Multiple Resource Areas: Visual Quality and Aesthetics, Noise, and Vibration	B.S., City and Regional Planning, California Polytechnic State University, San Luis Obispo, 1994
Zach Bentzler	Graphics development	M.U.P., Urban and Regional Planning, University of Wisconsin – Milwaukee, 2011 B.S., Geography, University of Wisconsin – La Crosse, 2009
Leon Skiles & Associates		
Leon Skiles	Environmental Specialist, Section 4(f)	Masters in Urban and Regional Planning, University of Oregon, Eugene, 1985 B.A., History, University of Oregon, Eugene, 1979
Zan Associates		
Dan Edgerton, AICP	Multiple Resource Areas: Land Use, Acquisitions and Displacements, Economic Effects, and Responses to Draft EIS Comments	M.A., Urban and Regional Planning, Minnesota State University – Mankato, 2007 B.S., Finance, Insurance and Real Estate, St. Cloud State University, 2006
Anderson Engineering		
Benjamin Hodapp, PWS	Wetlands and Water Resources	M.S., Water Resources Management, University of Wisconsin-Madison, 2002 B.S., Biology, Ecology, Minnesota State University- Mankato, 1999

Joe Aden	Geographic Information Systems	Geomatics Advanced Technical Certificate, St. Paul College, 2007
Todd Udvig	Wetlands and Water Resources	M.S., Candidate, Geographic Information Science, St. Mary's University, Minneapolis, 2013 M.S., Forestry, Southern Illinois University, Carbondale, 1985 B.S., Biology, University of Washington, River Falls, 1980
Cross-Spectrum Acoustics		
Lance Meister, INCE Member	Environmental Documentation: Noise/ Vibration	B.S. Civil Engineering, Temple University, Philadelphia, PA, 1994, Magna Cum Laude
Herb Singleton, PE, INCE Board Certified	Environmental Documentation: Noise/ Vibration	B.S., Mechanical Engineering, Massachusetts Institute of Technology, 1995
106 Group		
Jennifer Bring	Cultural Resources – Section 106	B.A., Anthropology-Archaeology Emphasis, Minnesota State University Moorhead, 2001
Saleh Miller	Cultural Resources – Architectural History	M.S., Historic Preservation, School of the Art Institute of Chicago, 2006 B.A., Art History with Architectural History emphasis, University of Wisconsin, Milwaukee, 2003
Anne Ketz	Cultural Resources – Archaeology/ Historical Archaeology	M.A., Historical Archaeology, University of Massachusetts, Boston, 1986 B.A., Ancient History/Archaeology, University of Manchester, England, 1980
Peer Halvorsen	Cultural Resources – Archaeology	B.A., Anthropology, Hamline University, 2005
Nathan Moe	GIS/Graphics	B.A., Urban and Regional Studies, University of Minnesota, Duluth, 2003 AutoCAD Certification, Ketiv Technologies, 2007

Appendix C
Supporting Documents and Technical Reports
(Incorporated by Reference)

APPENDIX C

Supporting Documents and Technical Reports (Incorporated by Reference)

The following supporting documents and technical reports are incorporated by reference in the Supplemental Draft EIS. All documents are available for review during the Supplemental Draft EIS comment period at www.swlrt.org, unless otherwise noted. A hard copy of each document can also be viewed at the Southwest LRT Project Office located at 6465 Wayzata Blvd., Suite 5000, St. Louis Park, MN 55426.

- 10,000 Lakes Archaeology, LLC, Archaeological Research Services, Archaeo-Physics, LLC, and Merjent, Inc. 2014. *Phase II Archaeological Survey for the Southwest Light Rail Transit Project*. Prepared for Metropolitan Council. This report is not available publicly to help preserve the identified resources.
- The 106 Group Ltd. 2014a. *Phase I/Phase II Architectural History Survey, Southwest LRT Project, Hennepin County, Minnesota, Volume Six: Supplemental Report Number Three (SDEIS), SDEIS Areas in the Following Survey Zones: Eden Prairie Survey Zone, Hopkins Survey Zone, St. Louis Park Survey Zone, Minneapolis West Residential Survey Zone*. Prepared for Metropolitan Council. This report identifies all previously listed and eligible properties within the area of potential effect (APE), and identifies the surveys of properties to determine if any properties are recommended as eligible for listing in the National Register of Historic Places.
- The 106 Group Ltd. 2014b. *Phase 1a Archaeological Investigation, Southwest Light Rail Transit, Hennepin County, Minnesota, SDEIS Areas: Eden Prairie Segment, Hopkins Operations and Maintenance Facility, and St. Louis Park/Minneapolis Segment*. Prepared for Metropolitan Council. This report identifies previously listed and eligible or potentially eligible archaeological sites within the APE (including sites identified during previous investigations for the Southwest LRT Project) and determines the potential for the presence of unknown archaeological resources. This report has redacted information about archaeological sites to help preserve the identified resources.
- The 106 Group Ltd. 2014c. *Phase I Archaeological Investigation, Southwest Light Rail Transit, Hennepin County, Minnesota, SDEIS Areas: Eden Prairie Segment*. This report summarizes the Phase I investigation of Area C, which was identified as an area of higher archaeological potential in the Phase 1a investigation. Attachment B, which includes figures, has been redacted to help preserve the identified resources.
- AECOM. 2013. *Supplemental Draft EIS Traffic Analysis – Technical Issue #1*. Prepared for Metropolitan Council. This memorandum documents the traffic analysis of potential Eden Prairie alignment adjustments considered in the Southwest LRT Supplemental Draft EIS. The memorandum documents the technical methodology, assessment of traffic impacts, traffic analysis results, and potential mitigation strategies.
- AECOM and Kimley-Horn and Associates, Inc. 2014. *Operations and Maintenance Facility (OMF) Site Selection TI #23*. Prepared for Metropolitan Council. This report documents the site-selection process and recommended finalist sites for the OMF.
- Anderson Engineering of Minnesota, LLC. 2013. *Wetland Investigation Report, Southwest LRT (Metro Green Line Extension)*. Prepared for Metropolitan Council. This report documents the identification and delineation of aquatic resources occurring within the defined project study area, in accordance with the *Corps of Engineers Wetlands Delineation Manual* (United States Army Corps of Engineers [USACE], 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (USACE, 2010).
- Anderson Engineering of Minnesota, LLC. 2014. *2014 Supplemental Wetland Investigation Report, Southwest LRT (Metro Green Line Extension)*. Prepared for Metropolitan Council. This report documents the identification and delineation of aquatic resources occurring within the defined project study area, in accordance with the *Corps of Engineers Wetlands Delineation Manual* (United States Army Corps of Engineers [USACE], 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (USACE, 2010).

- Federal Transit Administration (FTA) and Minnesota State Historic Preservation Office (MnSHPO). 2012. *Section 106 Programmatic Agreement Between the Federal Transit Administration and The Minnesota State Historic Preservation Office Regarding the Construction of the Interchange Project Minneapolis, Minnesota.* This agreement documents the stipulations with which the Interchange Project will be implemented in order to take into account the effects of the undertaking on historic properties.
- Hennepin County Regional Railroad Aut*hority (HCRRA). 2007. Southwest Transitway Alternatives Analysis Final Report*. Available at: http://old.swlrtcommunityworks.org/technical-documents/cat_view/57-archive*/4-alternatives-analysis.html. This report identifies a*nd compares the benefits, costs, and impacts of a range of transit options for the Southwest Corridor. Alternatives identified as most likely to meet project goals were recommended for further evaluation in future steps of the Project Development process.
- Hennepin County Regional Railroad Authority (HCRRA). 2009/2012. *Southwest Transitway Scoping Summary Report*. Available at: http://www.metrocouncil.org/Transportation/Projects/Current-Projects/Southwest-LRT/Environmental/Scoping.aspx. This report summarizes the results of the Draft EIS scoping process. The scoping process obtained public input on the project purpose and need, identified potential options to address the purpose and need, and identified environmental issues associated with the proposed project to analyze in the Draft EIS. On September 25, 2012, the HCRRA amended the Southwest Transitway Scoping Summary Report (which serves as the Scoping Decision Document under MEPA) to include the impacts of relocating freight rail for the four build alternatives and including a collocation alternative where freight rail, light rail and the commuter bike trail collocate, share a common corridor, between Louisiana Avenue and Penn Avenue. The amendment was authorized with approval of Board Action Request 12-HCRRA-0049 (see http://board.co.hennepin.mn.us/sirepub/cache/246/jpxfy0xt402wb2w41np5tk3x/20603003192015020512715.PDF). Notice of the amendment to the scoping report was issued in the Environmental Quality Board Monitor on October 15, 2012.
- Hennepin County Regional Railroad Authority (HCRRA). 2012. *Southwest Transitway Draft Environmental Impact Statement*. October 2012. Available at: http://www.metrocouncil.org/Transportation/Projects/Current-Projects/Southwest-LRT/Environmental/DEIS.aspx. The Draft EIS describes and discusses the purpose and need for the project, alternatives considered, impacts to those alternatives, and agencies and persons consulted.
- Hess, Roise and Company. 2012. *Phase I/Phase II Architecture History Investigation for the Proposed Southwest Transitway Project, Hennepin County, Minnesota, Volume Two: Minneapolis West Residential Survey Zone, Minneapolis South Residential/Commercial Survey Zone, Minneapolis Downtown Survey Zone, Minneapolis Industrial Survey Zone, Minneapolis Warehouse Survey Zone (Excluding Railroad Properties)*. Prepared for Metropolitan Council. This report identifies all previously listed and eligible properties within the area of potential effect (APE), and identifies the surveys of properties to determine if any properties are recommended as eligible for listing in the National Register of Historic Places.
- Kimley-Horn and Associates, Inc. 2013. *Freight Alignment – Traffic Impact Evaluation Memorandum*. Prepared for Metropolitan Council. This technical memorandum summarizes the traffic impact evaluation of proposed freight alignments. The memorandum updates the analysis and documentation of freight alignments presented in the Draft EIS.
- Mead & Hunt, Inc. 2014. *Phase I/Phase II Architecture History Investigation for the Proposed Southwest LRT Project, Hennepin County, Minnesota, Volume Five: Supplemental Report Number Two, Additional Areas/Properties in the Following Survey Zones: St. Louis Park Survey Zone, Minneapolis West Residential Survey Zone*. Prepared for Metropolitan Council. This report supplements the Phase I/Phase II Architecture History investigations conducted between 2008 and 2012 for this project. Investigations were conducted for: 1) one property in the St. Louis Park survey zone that was not included in the original Phase I survey, and 2) a Phase II evaluation of three residential properties and a potential historic district identified in the Minneapolis West Residential Survey Zone.

- Mead & Hunt. 2010. *Phase I/Phase II Architecture History Investigation for the Proposed Southwest Transitway Project, Hennepin County, Minnesota, Volume One: Eden Prairie Survey Zone, Minnetonka Survey Zone, Hopkins Survey Zone, St. Louis Park Survey Zone (Excluding Railroad Properties)*. Prepared for Metropolitan Council. This report identifies all previously listed and eligible properties within the area of potential effect (APE), and identifies the surveys of properties to determine if any properties are recommended as eligible for listing in the National Register of Historic Places.
- Metropolitan Council. 2013. *Southwest Light Rail Transit Operations and Maintenance Facility Basis of Design Report.* This report documents the methodology used in defining the functional and operating requirements for the proposed OMF to store, service, and maintain the light rail vehicles.
- Metropolitan Council. 2014a. *Agency Coordination Plan for the Southwest LRT (Green Line Extension) Project*. This plan is an update to the Agency Coordination Plan completed for the Draft EIS to reflect current coordination practices and procedures. The plan provides the structure for coordination among Federal Transit Administration (FTA), Metropolitan Council, participating agencies, and the public during the Supplemental Draft EIS and Final EIS processes to comply with various federal and state environmental regulations.
- Metropolitan Council. 2014b. *Communications and Public Involvement Plan*. This plan identifies key business and community groups within the Southwest LRT corridor and strategies to maximize opportunities for public involvement and communication during the design and construction process of the Southwest LRT Project.
- Metropolitan Council. 2014c. *Kenilworth Corridor Vegetation Inventory*. This report provides a vegetation inventory in the Kenilworth corridor to inform potential future landscaping design.
- Metropolitan Council. 2014d. *Kenilworth Shallow LRT Tunnel Basis of Design Technical Report. This report describes the design specifica*tions and construction sequencing of the shallow light rail tunnels' alignment developed by the Southwest LRT Project engineering team; summarizes the potential mitigation of environmental and recreational resource impacts; and details operations and maintenance activities anticipated to be directly related to the shallow tunnel.
- Metropolitan Council. 2015a. *Draft Preliminary Evaluation of Adjustments, Eden Prairie Alignment, Technical Issue #1.* This technical memorandum evaluates alignment and station location adjustments and decision making process for Technical Issue #1 – Eden Prairie Alignment/Stations in Eden Prairie for the Southwest Light Rail Transit Project.
- Metropolitan Council. 2015b. *Southwest LRT Project Identification of Grant-Funded Parks and Natural Areas Technical Memorandum.* This technical memorandum documents the analysis of the proximity of 6(f) properties to the Southwest Light Rail Transit Project.
- Metropolitan Council. 2015c. *Guide to the Supplemental Draft EIS*. This guide highlights key changes to the Project since the publication of the Draft EIS, and focuses on the potential impacts that have generated the most interest among residents of the Twin Cities region.
- Minnesota State Historic Preservation Office. National Register of Historic Places files. Minnesota Historical Society. Available at: 345 Kellogg Blvd. W., St. Paul, MN 55102. These files include historic property inventory forms, reports, and National Register nomination forms. These files are not available to the public.
- MnDOT Cultural Resources Unit. 2014a. Section 106 Consultation Package (April 2014). This package includes potential effects on historic properties, photolog, overview map, and track drawings.
- MnDOT Cultural Resources Unit. 2014b. Section 106 Consultation Meeting Notes (April 30, 2014).
- MnDOT Cultural Resources Unit. 2014c. Section 106 Consultation Package (November 2014). This package includes preliminary determination of effects on historic properties, photolog, track drawings, Kenilworth Lagoon study (historic context and history of the lagoon, and detailed physical description), and plan sheets of the existing and proposed bridge across the Kenilworth Lagoon.

- MnDOT Cultural Resources Unit 2014d. Section 106 Meeting Notes (November 24, 2014).
- MnDOT Cultural Resources Unit. 2015a. Section 106 Consultation Package (February 2015). This package includes information on effects to historic properties related to the Kenilworth Lagoon crossing, revised bridge design concepts, and comments received on the November 2014 consultation.
- MnDOT Cultural Resources Unit. 2015b. Section 106 Consultation Meeting Notes (February 6, 2015).
- MnDOT Cultural Resources Unit. 2015c. Section 106 Consultation Meeting Notes (February 24, 2015).
- Short Elliott Hendrickson Inc. 2013a. *Modified Phase I Environmental Site Assessment, Southwest Light Rail Transit – Segment A and Freight Rail Co-location.* Prepared for Metropolitan Council. The modified Phase I environmental site assessment (ESA) identifies the locations of areas with soil and groundwater contamination for areas evaluated in this Supplemental Draft EIS. Appendices available at the Southwest LRT Project Office.
- Short Elliot Hendrickson Inc. 2013b. *Modified Phase I Environmental Site Assessment, Southwest Light Rail Transit – Segment 4*. Prepared for Metropolitan Council. The modified Phase I ESA identifies the locations of areas with soil and groundwater contamination for areas evaluated in this Supplemental Draft EIS. Appendices available at the Southwest LRT Project Office.
- State of Minnesota, Department of State. Juluis A. Schmahl, Secretary of State. Kenilworth Corridor Right of Way Easement; excerpted from book A of State Bank Records, p. 209. (June 1912).
- Summit Envirosolutions. 2010. *Phase I/Phase II Architecture History Investigation for the Proposed Southwest Transitway Project, Hennepin County, Minnesota, Volume Three: Minneapolis and Saint Louis Railroad Survey Zone, Chicago Milwaukee and St. Paul Railroad Survey Zone*, Minneapolis Northfield and Southern Railroad Survey Zone, Great Northern Survey Zone. Prepared for Metropolitan Council. This report identifies all previously listed and eligible railroad properties within the area of potential effect (APE), and identifies the surveys of properties to determine if any properties are recommended as eligible for listing in the National Register of Historic Places.

Appendix D
Sources and References Cited

APPENDIX D

Sources and References Cited

B

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City of Hopkins. 2012. *Revenue Summary – 2011*. City of Hopkins, MN. Available at: http://www.hopkinsmn.com/budget/pdf/2011-budget.pdf.

Clinton, William. 1994. *Executive Order 12898. Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. February 11, 1994. Available at: http://www.archives.gov/federal-register/executive-orders/pdf/12898.pdf.

Corridors of Opportunity (now The Partnership for Regional Opportunity). 2014. *Community Outreach and Engagement.* Available at: http://www.corridorsofopportunity.org/activities/engagement.

F

Federal Highway Administration (FHWA). 1987. *Guidance for Preparing and Processing Environmental and Section 4(f) Documents*. Technical Advisory T 6640.8A. Federal Highway Administration, Office of Environmental Policy, Washington, DC. Available at: http://environment.fhwa.dot.gov/guidebook/vol2/doc7i.pdf

Federal Highway Administration (FHWA). 1988. *Visual Impact Assessment for Highway Projects*. Publication FHWA-HI-88-054. Federal Highway Administration, Office of Environmental Policy, Washington, DC. Available at: http://www.dot.ca.gov/ser/downloads/visual/FHWAVisualImpactAssmt.pdf.

Federal Highway Administration (FHWA). 2012. *Section 4(f) Policy Paper.* Federal Highway Administration, Office of Planning, Environment and Realty, Project Development and Environmental Review, Washington, DC. July 20, 2012. Available at: http://environment.fhwa.dot.gov/4f/4fpolicy.asp.

Federal Transit Administration (FTA). 2006. *Transit Noise and Vibration Impact Assessment.* Publication FTA-VA-90-1003-06. United States Department of Transportation, Federal Transit Administration, Office of Planning and Environment, Washington, DC. May 2006. Available at: http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf.

Federal Transit Administration (FTA). 2008a. *Circular FTA C 5010.1D, Grant Management Requirements*. November 1, 2008. Available at: http://www.fta.dot.gov/documents/C_5010_1D_Finalpub.pdf.

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Appendix E
Agency Coordination Letters

APPENDIX E

Agency Coordination Letters

1. Letter to U.S. Fish and Wildlife Service requesting concurrence – No Effect Determination – Higgins eye pearlymussel for the Southwest Light Trail Transit Project, July 23, 2012
2. Response from U.S. Fish and Wildlife Service indicating that there are no federally listed or proposed species and/or designated or proposed critical habitat within the action area of the proposed project, August 21, 2012
3. Minnesota State Historic Preservation Office letter regarding Phase I Archaeology Report for the Southwest Light Rail Transit Project, SHPO Number: 2009-0080, February 14, 2013
4. Minnesota State Historic Preservation Office letter regarding Phase I Archaeology Report for the Southwest Light Rail Transit Project, SHPO Number: 2009-0080, March 12, 2013
5. Invitation letter to U.S. Army Corps of Engineers to become a cooperating agency for the Southwest Light Rail Transit Project, June 14, 2013
6. Letter of acceptance from the U.S. Army Corps of Engineers to become a cooperating agency for the Southwest Light Rail Transit Project, July 18, 2013
7. Minnesota State Historic Preservation Office letter regarding Phase I/II Architecture History Investigations, Volume 5, Supplemental Report Number Two, SHPO Number 2009-0080, April 2, 2014
8. Minnesota State Historic Preservation Office letter regarding Phase II Archaeological Survey, SHPO Number 2009-0080, April 2, 2014
9. Minneapolis Park and Recreation Board letter regarding comments on the April 2014 Section 106 consultation package, May 16, 2014
10. City of Minneapolis comment email regarding comments on the April 2014 Section 106 consultation package, May 16, 2014
11. Minnesota State Historic Preservation Office letter regarding the Section 106 consultation package materials and meeting, SHPO Number 2009-0080, May 21, 2014
12. Minnesota State Historic Preservation Office letter providing concurrence on Grand Rounds and other property boundaries, SHPO Number: 2009-0080, June 5, 2014
13. Minnesota State Historic Preservation Office review letter regarding Phase I/Phase II Architecture History Investigation and Phase 1a Archaeological Investigation for the Southwest Light Rail Transit Project, SHPO Number: 2009-0080, June 5, 2014
14. Minnesota State Historic Preservation Office review letter providing clarification on Phase II investigations in the vicinity of archaeological sites 21HE0436 and 21HE0437, SHPO Number: 2009-0080, July 3, 2014
15. FTA letter to Surface Transportation Board seeking concurrence to rescind its cooperating agency status due to project changes, July 9, 2014
16. Response from the Surface Transportation Board to FTA concurring on rescinding cooperating agency status, August 22, 2014
17. Federal Railroad Administration letter regarding FRA safety jurisdiction determination, October 6, 2014

18. MnDOT CRU letter to Minnesota State Historic Preservation Office letter regarding consulting party comments on April 2014 Section 106 consultation package, SHPO Number: 2009-0080, October 13, 2014
19. United States Army Corps of Engineers letter to FTA regarding the Southwest Light Rail Transit Concurrence Points package, October 16, 2014
20. Minnesota State Historic Preservation Office letter regarding Phase I Archaeology report for Area C for the Southwest Light Rail Transit Project, SHPO Number: 2009-0080, November 7, 2014
21. Kenwood Isles Area Association (KIAA) letter regarding comments on April 2014 Section 106 consultation package, and regarding October 17, 2014 adjustments to the Area of Potential Effect. Sent on behalf of KIAA by Preservation Design Works, LLC, November 12, 2014
22. Kenwood Isles Area Association (KIAA) letter regarding comments on November 2014 Section 106 consultation package. Sent on behalf of KIAA by Preservation Design Works, LLC, December 10, 2014
23. Minneapolis Park and Recreation Board letter regarding comments on November 2014 Section 106 consultation package, December 12, 2014
24. Minnesota State Historic Preservation Office review letter regarding comments on November 2014 Section 106 consultation package, and regarding October 17, 2014 revisions to the Area of Potential Effect and research design addendum, SHPO Number: 2009-0080, December 12, 2014
25. FTA letter to United States Army Corps of Engineers (USACE) inviting USACE to delegate Section 106 responsibilities to FTA, December 16, 2014
26. MnDOT CRU letter to Hennepin County (HC), inviting HC to become a Section 106 consulting party, December 16, 2014
27. Hennepin County letter to MnDOT CRU accepting consulting party status, December 17, 2014
28. Minneapolis Parks and Recreation Board letter to FTA regarding request for meeting to discuss legal jeopardy to the FTA New Starts Program Created by the Implementation of the Program for the Southwest Light Rail Project ("SWLRT Project") in Minneapolis, Minnesota by the FTA and the Metropolitan Council, January 2, 2015.
29. FTA letter to Minneapolis Parks and Recreation Board in response to MPRB letter dated January 2, 2015, regarding the Southwest Light Rail Project in Minneapolis, Minnesota, January 15, 2015.
30. United States Army Corps of Engineers (USACE) letter to Federal Transit Administration (FTA) accepting Section 106 Delegation to FTA for the Southwest LRT Project and requesting continuing involvement as a Section 106 consulting party, January 15, 2015
31. Minnesota State Historic Preservation Office email to MnDOT CRU concurring with consulting party status for Cedar-Isles-Dean Neighborhood Association, February 2, 2015
32. FTA letter to Cedar-Isles-Dean Neighborhood Association concurring on consulting party status, February 17, 2015
33. United States Army Corps of Engineers letter to SPO regarding the Southwest Light Rail Transit Preliminary Jurisdictional Determination, February 18, 2015

U.S. Department
of Transportation
Federal Transit Administration

REGION V
Illinois, Indiana,
Michigan, Minnesota,
Ohio, Wisconsin

200 West Adams Street
Suite 320
Chicago, IL 60606-5253
312-353-2789
312-886-0351 (fax)

July 23, 2012

Tony Sullins, Field Supervisor
U.S. Fish and Wildlife Service
Twin Cities Field Office
4101 East 80th Street
Bloomington, MN 55425

RE: Request for Concurrence - No Effect Determination – Higgins eye pearlymussel
Southwest Transitway Project, Hennepin County, Minnesota

Dear Mr. Sullins:

The Federal Transit Administration (FTA) is requesting concurrence from the U.S. Fish and Wildlife Service (Service) that the above referenced action will have no effect on federally-listed species.

Project Description
Hennepin County and the Metropolitan Council are proposing to construct a light rail transit (LRT) facility connecting the southwestern suburbs of the Twin Cities metropolitan area to downtown Minneapolis. Five build alternatives are being considered in the Draft Environmental Impact Statement. These alternatives are presented in the attached figure. None of these alternatives would cross or touch the Mississippi River. The project components would include:

- Between 14 and 16 miles of trackway and overhead catenary power (depending on the alternative selected)
- Up to 21 light rail stations
- Up to 15 park and ride lots
- Approximately 17 traction power substations
- An operations and maintenance facility

All project components would be located within Hennepin County. The end of the line for four of the alternatives would be the Target Field Station located between 5th Avenue North and I-394 on North 5th Street and approximately 0.6 of a mile from the Mississippi River. The end of line for the fifth alternative would be at the intersection of Washington Avenue and Nicollet Mall approximately 0.3 of a mile from the river. (See attached detailed graphic for line locations.)

The closest construction staging area would be located in the vicinity of 6th Avenue North and North 4th Street approximately 0.5 of a mile from the Mississippi. (See attached detailed graphic for construction staging location.) The project elements and construction limits do not cross the Mississippi River; therefore no direct impacts to the river are anticipated. The only potential

impacts that appear possible at this time would be uncontrolled runoff from within the project construction limits reaching the Mississippi River. Should this occur, limited temporary incremental degradation of river water quality could occur. However, this is unlikely due to the distance of the project construction limits from the river and the fact that best management practices (BMPs) would be employed during construction to eliminate uncontrolled runoff.

Listed Species within the Project Area

According to the "County Distribution of Minnesota's Federally-Listed Threatened, Endangered, Proposed and Candidate Species" list provided by the Service, the only federally-listed species within Hennepin County is the Higgins eye pearlymussel (*Lampsilis higginsii*), a federally-listed endangered species. This species occurs within the Mississippi River, which is outside the limits of the proposed LRT project.

Determination

Based on the fact that the Higgins eye pearlymussel does not occur within the project limits and that the project will not impact Higgins eye pearlymussel habitat, the FTA has determined that the proposed action will have no effect on federally-listed species. We are requesting concurrence that consultation with your office under Section 7 of the Endangered Species Act of 1973, as amended, is complete.

If you require additional information, please contact Maya Sarna, AICP, Environmental Protection Specialist at (202) 366-5811.

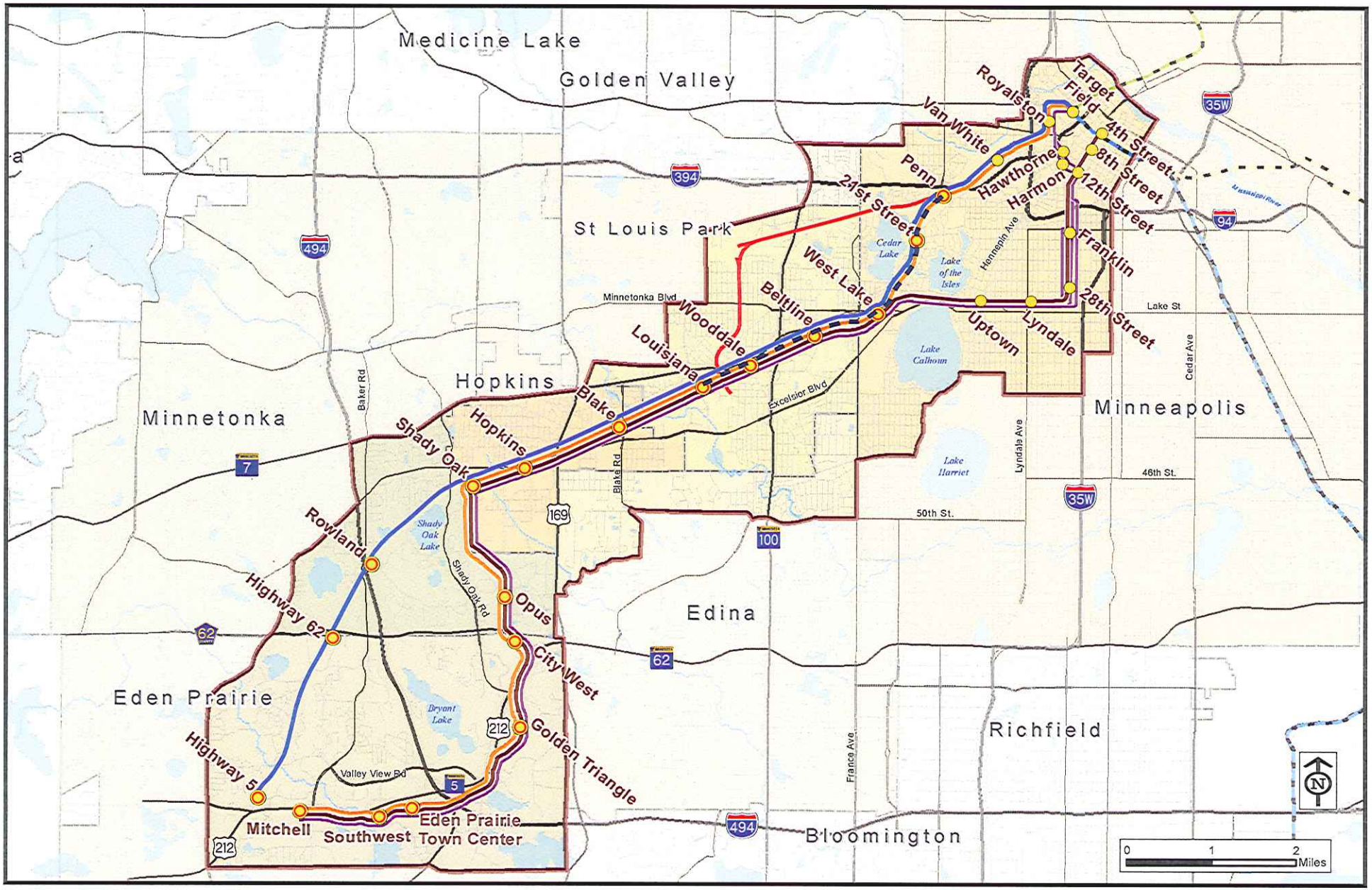
Sincerely,

Rhonda Reed

for Marisol R. Simón
Regional Administrator

cc:
USFWS – Nick Rowse
Hennepin County – Katie Walker
Metropolitan Council – Nani Jacobson
HDR – Janet Kennison, Scott Reed
file

Southwest Transitway Study Area



SOUTHWEST transitway

Draft Environmental Impact Statement

- Study Area
- Station
- Park & Ride Station
- Freight Rail Relocation
- LRT 1A
- LRT 3A
- Colocation area with 3A-1
- LRT 3C-1 (Nicollet Mall)
- LRT 3C-2 (11th/12th Street)
- Hiawatha Light Rail
- Northstar Commuter Rail
- Central Corridor Light Rail
- Municipal Boundaries

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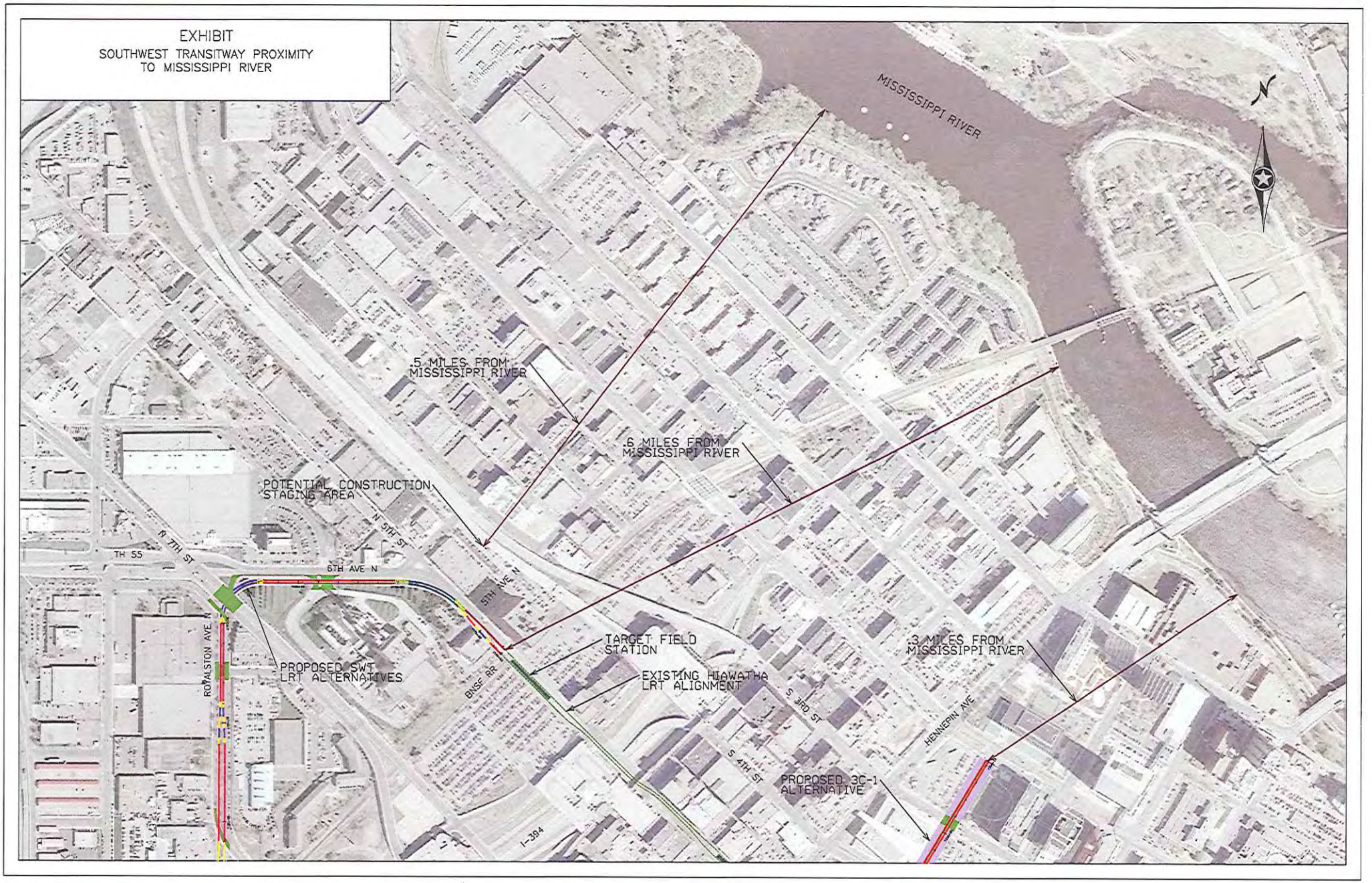
EXHIBIT
SOUTHWEST TRANSITWAY PROXIMITY
TO MISSISSIPPI RIVER
MISSISSIPPI RIVER
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.5 MILES FROM
MISSISSIPPI RIVER
.6 MILES FROM
MISSISSIPPI RIVER
.3 MILES FROM
MISSISSIPPI RIVER
POTENTIAL CONSTRUCTION
STAGING AREA
N 7TH ST
TH 55
N 5TH ST
6TH AVE N
5TH AVE N
ROYALSTON AVE N
PROPOSED SWT
LRT ALTERNATIVES
BNSF RR
TARGET FIELD
STATION
EXISTING HIAWATHA
LRT ALIGNMENT
S 3RD ST
S 4TH ST
HENNEPIN AVE
PROPOSED 3C-1
ALTERNATIVE
I-394

From: Andrew_Horton@fws.gov [mailto:Andrew_Horton@fws.gov]
Sent: Tuesday, August 21, 2012 4:01 PM
To: Simon, Marisol (FTA)
Cc: Maya.Sarna@fta.dot.gov
Subject: Southwest Transitway Project

Ms. Simon,

I have reviewed the Southwest Transitway Study Area and our records indicate there are no federally listed or proposed species and/or designated or proposed critical habitat within the action area of the proposed project. If project plans change, additional information on listed or proposed species becomes available, or new species are listed that may be affected by the project, consultation should be reinitiated. This concludes section 7 consultation for proposed construction at the above location. Thank you for your cooperation in meeting our joint responsibilities under section 7 of the Endangered Species Act. If you have any further endangered species questions, please contact me at (612) 725-3548 x2208

Andrew Horton
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Twin Cities ES Field Office
4101 American Blvd East
Bloomington, MN 55425-1665
(612) 725-3548 ext. 2208

Minnesota
Historical Society

State Historic Preservation Office

February 14, 2013

Mr. Dennis Gimmestad
MnDOT Cultural Resources Unit
Transportation Building, MS620
395 John Ireland Boulevard
St. Paul, MN 55155

Re: Phase I Archaeology Report for Southwest Transitway Project
Eden Prairie, Minnetonka, Edina, Hopkins, St. Louis Park & downtown Minneapolis
Hennepin County
SHPO Number: 2009-0080

Dear Mr. Gimmestad:

Thank you for providing the Phase I Archaeology Report dated December 2012, prepared for the above-referenced project by SWCA Environmental Consultants, to cover the locally preferred route alternative. We previously reviewed two Phase IA reports, in 2010 and 2012. Those investigations formed the basis of the Phase I archaeological survey presented in the December 2012 report.

It is difficult to review this report, because the maps and photographs are not included. They are listed in the Table of Contents as Appendices A-E, but they are not in the report we received. Instead, there is a page at the back that says: "Appendices A through E – Due to the sensitive nature of the information provided in the appendices, these maps will not be provided except by request to the Metropolitan Council." We need to have these materials to complete our review.

On the basis of the text, it appears that the Phase I archaeological survey was thorough. Forty areas indentified in the Phase IA investigations were surveyed. Four other areas were found to be outside the APE, or too disturbed to warrant survey. A total of eight archaeological sites were identified, and recommended by the consultant for Phase II evaluation. Mn/DOT is currently planning Phase II studies for seven of these sites. **We agree that this is appropriate.**

The report states that a Phase II evaluation will not be performed on one of the sites identified in area 3:k (21HE0410), because it is located at the edge of the APE, and will thus not be affected by the project. We will need to see the maps, photographs, and construction drawings to determine whether we agree. If a Phase II evaluation will not be conducted at this site, protective fencing or other measures should be depicted in the construction plans. If protective fencing will not be provided, the site should be evaluated or the APE revised.

We look forward to receiving the missing information and site documentation. Meanwhile, please call David Mather at 651-259-3454 if you have any further questions on this review.

Sincerely,

Mary Ann Heidemann, Manager
Government Programs and Compliance

Minnesota Historical Society

Using the Power of History to Transform Lives
PRESERVING > SHARING > CONNECTING

State Historic Preservation Office

March 12, 2013

Mr. Dennis Gimmestad
MnDOT Cultural Resources Unit
Transportation Building, MS620
395 John Ireland Boulevard
St. Paul, MN 55155

Re: Phase I Archaeology Report for the Southwest Transitway Project
Eden Prairie, Minnetonka, Edina, Hopkins, St. Louis Park & downtown Minneapolis
Hennepin County
SHPO Number: 2009-0080

Dear Mr. Gimmestad:

Thank you for providing the missing maps and appendices prepared for the above-referenced project by SWCA Environmental Consultants, to cover the locally preferred route alternative. We previously reviewed two Phase IA reports, in 2010 and 2012. Those investigations formed the basis of the Phase I archaeological survey presented in the December 2012 report.

Based on the supplemental information provided, we now can understand and agree with the report, which states that a Phase II evaluation will not be performed on one of the sites identified in area 3:k (21HE0410), because it is located at the edge of the APE, and will thus not be affected by the project. In fact, we now see that the sites of concern are located on the opposite side of TH 62, and therefore will not be affected. We agree that protective fencing will not be required, based on site location.

Please call David Mather at 651-259-3454 if you have any further questions on this review.

Sincerely,

Mary Ann Heidemann, Manager
Government Programs and Compliance

U.S. Department
of Transportation
**Federal Transit
Administration**

REGION V
Illinois, Indiana,
Michigan, Minnesota,
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200 West Adams Street
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RECEIVED
JUN 21 2013
BY: SAO-PAM

June 14, 2013

Ms. Tamara Cameron, Chief, Regulatory Branch
Department of the Army
St. Paul District, Corps of Engineers
180 Fifth Street East, Suite 700
St. Paul, Minnesota 55101

Re: Invitation to Become a Cooperating Agency for the Southwest Light Rail Transit Project in Minneapolis, Minnesota

Dear Ms. Cameron:

For the purposes of complying with the National Environmental Policy Act (NEPA), the Federal Transit Administration (FTA) and the Metropolitan Council (Council) are preparing a Supplemental Draft Environmental Impact Statement (SDEIS) and Final Environmental Impact Statement (FEIS) for the proposed Southwest Light Rail Transit (SWLRT) Project. The SWLRT SDEIS will follow the October, 2012 Draft Environmental Impact Statement (DEIS), completed by FTA in partnership with Hennepin County Regional Railroad Authority (HCRRA) and the Council. HCRRA served as the local lead governmental agency during the Alternatives Analysis and DEIS phases, until transitioning the project to the Council upon the close of the public comment period for the DEIS on December 31, 2012. The U.S. Army Corps of Engineers (USACE) had previously prepared a Preliminary Jurisdictional Determination in July, 2009 for the DEIS, at the request of HCRRA. The USACE also submitted comments on the DEIS in December, 2012. Pursuant to those comments regarding the likely need for a Clean Water Act Section 404 permit, SWLRT was selected as a "Nationally or Regionally Significant Project" as part of the Federal Infrastructure Projects Permitting Dashboard. A copy of the Dashboard is attached.

The USACE has jurisdiction and expertise with respect to the discharge or fill material into Waters of the United States (WOUS). With this letter, and subsequent to our initial request for the USACE to become a cooperating agency sent September 25, 2008, we are formally requesting the USACE to participate in the SWLRT Project as a Cooperating Agency in preparation of the SDEIS and FEIS, in compliance with sections of the CEQ Regulations addressing cooperating agencies status (40 CFR 1501.6 and 40 CFR 1508.5).

The SWLRT Project will operate from downtown Minneapolis through the southwestern suburban cities of St. Louis Park, Hopkins, Minnetonka, and Eden Prairie, passing in close proximity to the city of Edina (map attached). The proposed alignment will be primarily at-grade and will include 17 new stations and approximately 15.8-miles of double track. The line will

connect major activity centers in the region including downtown Minneapolis, Methodist Hospital in St. Louis Park, the Opus/Golden Triangle employment area in Minnetonka and Eden Prairie, and , the Eden Prairie Center Mall. Ridership in 2030 is projected at 29,660 weekday passengers. The project will interline with the Green Line (Central Corridor LRT), which will provide a one-seat ride to destinations such as the University of Minnesota, the State Capitol, and downtown St. Paul. The proposed SWLRT will be part of an integrated system of transitways, including connections to the METRO Blue Line, the Northstar Commuter Rail line, a variety of major bus routes along the alignment, and proposed future transitway and rail lines. The FTA is the lead federal agency and the Council is the project sponsor and grantee of Federal funds.

By becoming a Cooperating and Participating Agency, we invite the USACE to become more directly involved in the development of SWLRT Project in the following ways:

1. Continue to provide timely review and written comments, as the SDEIS and other documents are developed;
2. Participate in coordination meetings, conference calls, and joint field reviews, as appropriate; and
3. Pursuant to 40 CFR 1506.3, the USACE may adopt without re-circulating the SWLRT SDEIS or FEIS when the USACE concludes that its comments and suggestions have been satisfied.

The Council's manager for the SDEIS and FEIS, Ms. Nani Jacobson, has been in contact with your agency's local representative, Ms. Melissa Jenny, over the last few months. We believe the best interests of both the SWLRT Project and the USACE are served by your agency's active participation as a Cooperating Agency.

Please respond to FTA in writing an acceptance or denial of the invitation prior to July 19, 2013. If you elect not to become a Cooperating Agency, you must decline this invitation in writing, indicating your agencies reason for declining, specifically that the USACE has no jurisdiction or authority with respect to this project, has no expertise or information relevant to the project, and does not intend to submit comments on the project. The acceptance or declination of this invitation may be sent electronically to William Wheeler, Community Planner, at William.Wheeler@dot.gov; please include the title of the official responding. Please contact Mr. Wheeler at 312-353-2639 if you have any questions or would like to discuss the project in more detail.

Thank you for your cooperation and interest in this project.

Sincerely,

Rhonda Reed

for Marisol Simon
Regional Administrator

Cc:Melissa Jenny, St. Paul District, Corps of Engineers

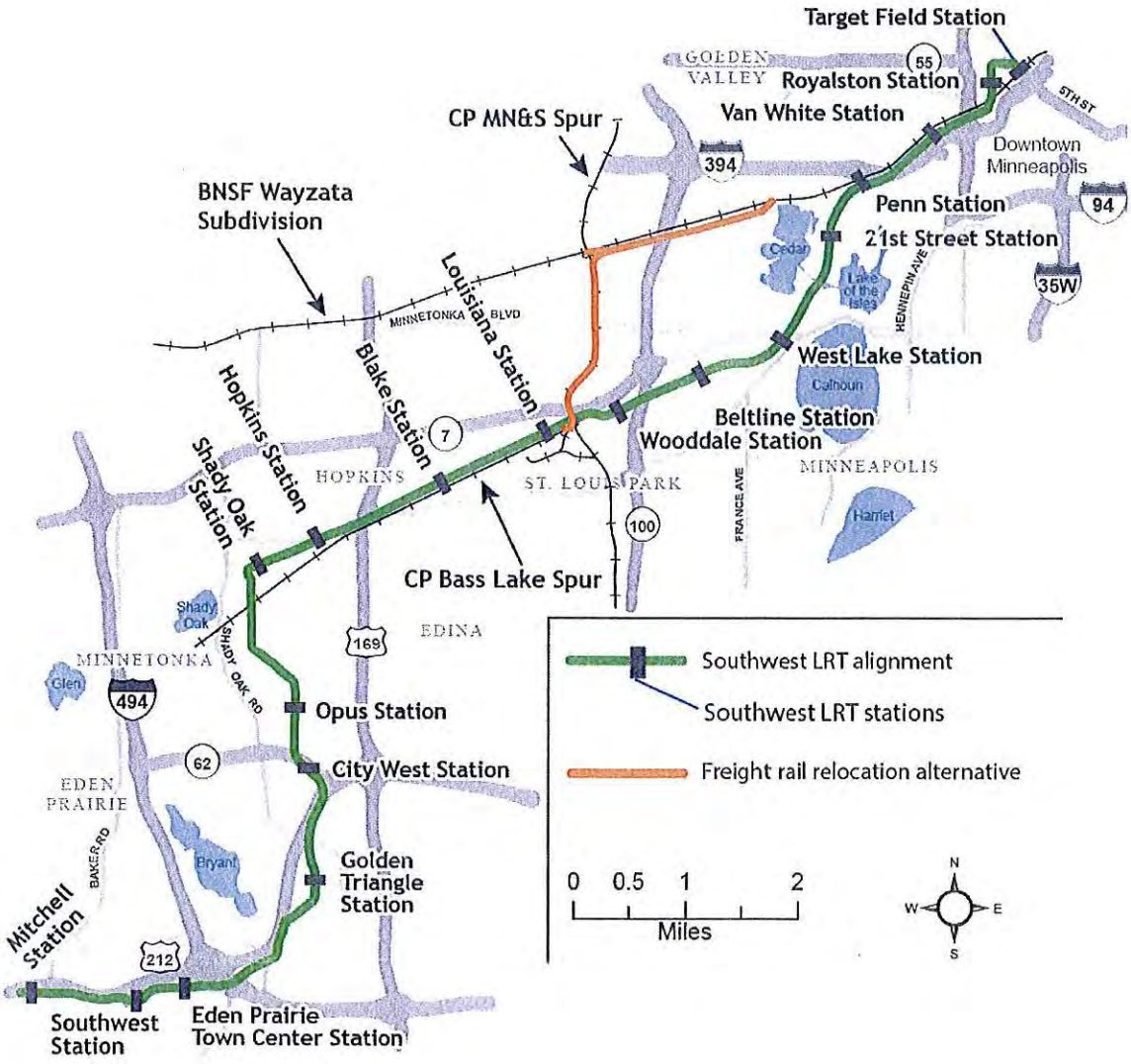
Re: Invitation to Become a Cooperating Agency for the Southwest Light Rail Transit Project in Minneapolis, Minnesota

Maya Sarna, FTA HQ
Bill Wheeler, FTA, Region V
Nani Jacobson, Metropolitan Council

Attachments:
SWLRT Project Map
Federal Infrastructure Projects Permitting Dashboard

SOUTHWEST
Green Line LRT Extension

Southwest LRT Project Map (DEIS Alternative LRT3A)



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SOUTHWEST LIGHT RAIL TRANSIT LINE (NATIONALLY OR REGIONALLY SIGNIFICANT PROJECTS)

Coordinating Agency
Department of Transportation

Accountable POC
Bill Wheeler

Project Status
In Progress

Download
XML Excel

Project Website
http://www southwesttransitway.org/

Description
The Southwest Light Rail Transitway (LRT) Project will greatly improve access to major employment centers and all area attractions for residents and commuters in greater Minneapolis by building new light rail service running between Read More

Reviews, Approvals and Permits

Click on the ▼ icon to view more information

Title	Responsible Agency	Responsible Agency POC Name	Target Completion Date	Status
Notice of Availability - FEIS	Department of Transportation	Maya Sarna	10/15/2014	Planned
Section 4(f) Determination	Department of Transportation	Maya Sarna	07/01/2014	Planned
Section 404 Permit	Department of Defense	Tamara Cameron	07/01/2014	Planned
Section 9 of the Rivers and Harbors Act Permit	Department of Homeland Security	Eric Washburn	07/01/2014	Planned
Section 106 Process	Department of Transportation	Maya Sarna	09/30/2014	Planned
Section 10 of the Rivers and Harbors Act	Department of Defense	Tamara Cameron	07/01/2014	Planned
Public Comment Period on DEIS	Department of Transportation	Maya Sarna	12/31/2012	Complete
SURFACE TRANSPORTATION BOARD APPROVAL	Department of Transportation	Christa Stoebner	11/10/2014	Planned
Availability of the FEIS	Department of Transportation	Maya Sarna	11/17/2014	Planned
Input on DEIS & FEIS content from Participating Agencies	Department of Transportation	Colleen Vaughn, Emeka Ezekwemba	11/14/2014	Planned
Publish Record of Decision	Department of Transportation	Maya Sarna	11/15/2014	Planned

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DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT, CORPS OF ENGINEERS
180 FIFTH STREET EAST, SUITE 700
ST. PAUL MINNESOTA 55101-1678

JUL 18 2013

REPLY TO
ATTENTION OF

Operations
Regulatory (MVP-2009-01283-MMJ)

Ms. Marisol Simon
U.S. Department of Transportation
Federal Transit Administration, Region V
200 West Adams Street, Suite 320
Chicago, Illinois 60606-5253

Dear Ms. Simon,

We recently received your invitation to become a cooperating agency in the preparation of the Supplemental Draft Environmental Impact Statement (SDEIS) and Final Environmental Impact Statement (FEIS) for the Southwest Light Rail Transit (SWLRT) Project, located in Hennepin County, Minnesota. As you mentioned in your letter, the Corps of Engineers does have jurisdiction and expertise with respect to wetlands and waters of the U.S. in proximity to the SWLRT project corridor. Therefore, in accordance with the Council on Environmental Quality's regulations for implementing the procedural provisions of the National Environmental Policy Act (NEPA), we accept your invitation to become a cooperating agency, and look forward to participating in the review of the SDEIS, the FEIS and other NEPA documents completed for this project.

We commented on the SWLRT Draft Environmental Impact Statement (DEIS) in December 2012. In our letter we concurred with the SWLRT Project Purpose & Need, as well as the Array of Alternatives & Alternatives Carried Forward for Further Analysis, points 1 & 2 as described in the NEPA/Clean Water Act (CWA) Section 404 merger process. We were unable to concur with point 3 of the merger process, Identification of the Selected Alternative, because the SWLRT Locally Preferred Alternative (LPA) as described in the DEIS is not the Least Environmentally Damaging Practicable Alternative (LEDPA), as defined in the 404(b)(1) Guidelines (Guidelines).

We understand that the SWLRT SDEIS will be analyzing additional route and Operations and Maintenance Facility (OMF) alternatives that were not discussed in the DEIS. Therefore, we will be revisiting point 2 of the merger process to determine if the range of alternatives evaluated in the SDEIS, and potentially carried forward into the FEIS, would satisfy CWA Section 404 regulatory requirements.

Printed on Recycled Paper

We are also committed to continuing coordination with you and the local SWLRT project team on concurrence point 3 of the NEPA/CWA Section 404 merger process, through technical review of the SDEIS, and through evaluation of impact avoidance measures.

Again, we appreciate and accept your invitation to become a cooperating agency in preparation of the SDEIS and FEIS for the SWLRT Project. If you have any questions, contact Melissa Jenny at (651) 290-5363. In any correspondence or inquiries, please refer to the Regulatory number shown above.

Sincerely,

Tamara E. Cameron
Chief, Regulatory Branch

Copies furnished:

Maya Sarna, FTA HQ
Bill Wheeler, FTA, Region V
Nani Jacobson, Metropolitan Council

Minnesota Historical Society

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STATE HISTORIC PRESERVATION OFFICE

April 2, 2014

Mr. Dennis Gimmestad
MnDOT Cultural Resources Unit
Transportation Building, MS620
395 John Ireland Boulevard
St. Paul, MN 55155

Re: Southwest Transitway Project
Eden Prairie, Minnetonka, Edina, Hopkins, St. Louis Park & Downtown Minneapolis
Hennepin County
SHPO Number: 2009-0080 (Phase I/II Architecture History Investigations)

Dear Mr. Gimmestad,

Thank you for continuing consultation on above-referenced project. It is being reviewed under Section 106 of the National Historic Preservation Act (36CFR800) and provisions of the Minnesota Historic Sites Act.

We have completed our review of the survey report entitled *Phase I/Phase II Architecture History Investigation for the Proposed Southwest Light Rail Transit Project, Hennepin County, Volume 5, Supplemental Report Number Two, Additional Areas/Properties in the Following Survey Zones: St. Louis Park Survey Zone, Minneapolis West Residential Survey Zone* (February 2014) which was submitted to our office on 25 February 2014.

We concur with your agency's determination that the following properties are **eligible** for listing in the National Register of Historic Places (NRHP):

- **Mahalia and Zachariah Saveland House** (HE-MPC-6766), 2405 West 22nd Street, Minneapolis - eligible under criterion C (architecture);
- **Frank W. and Julia C. Shaw House** (HE-MPC-6603), 2036 Queen Avenue South, Minneapolis - eligible under criterion C (architecture);
- **Kenwood Parkway Residential Historic District** (HE-MPC-18059), 1805 – 2206 Kenwood Parkway, Minneapolis – the residential historic district is eligible under criterion A (community planning and development). For clarification to what is stated in the report regarding the residential district's eligibility under criterion C, this parkway section is part of the contributing Kenwood Parkway Sub-segment of the Grand Rounds, a property previously determined eligible for listing in the NRHP under both criteria A and C.

We also concur with the determination that both the Nora C. and William Klein House (HE-MPC-6761) and the B'nai Abraham Synagogue (HE-SLC-566) are **not eligible** for listing in the NRHP.

Again, we thank you for your agency's commitment to completing high-quality identification and evaluation survey reports for the proposed light rail project. Feel free to contact me at 651-259-3456 or sarah.beimers@mnhs.org if you have any questions or concerns regarding our review.

Sincerely,

Sarah J. Beimers

Sarah J. Beimers
Manager, Government Programs and Compliance

cc: Hilary Dvorak, Minneapolis Heritage Preservation Commission
Heather Goodson, Mead and Hunt

Minnesota
Historical Society

STATE HISTORIC PRESERVATION OFFICE

April 2, 2014

Mr. Dennis Gimmestad
MnDOT Cultural Resources Unit
Transportation Building, MS620
395 John Ireland Boulevard
St. Paul, MN 55155

Re: Southwest Transitway Project
Eden Prairie, Minnetonka, Edina, Hopkins, St. Louis Park & Downtown Minneapolis
Hennepin County
SHPO Number: 2009-0080 (Phase II Archaeological Survey)

Dear Mr. Gimmestad,

Thank you for continuing consultation on above-referenced project. It is being reviewed under Section 106 of the National Historic Preservation Act (36CFR800) and provisions of the Minnesota Historic Sites Act.

We have completed our review of the survey report entitled *Phase II Archaeological Survey for the Southwest Light Rail Transit Project* (February 2014) which was submitted to our office on 27 February 2014.

We concur with your agency's determination that the following properties are **not eligible** for listing in the National Register of Historic Places (NRHP):

- **Brookview Terrace (21HE0413)**, St. Louis Park
- **Upton Avenue Ridge (21HE0412)**, Minneapolis
- **M&StL Cedar Lake Yards (21HE0408)**, Minneapolis
- **Kenwood Station (21HE0414)**, Minneapolis

We also concur with the determination that the following properties are **eligible** for listing in the NRHP:

- **St. Paul & Pacific Rail Bed (21HE0435)**, St. Louis Park, eligible under criteria C and D
- **Cedar Lake Ice Company (21HE0409)**, Minneapolis, eligible under criterion D

Regarding the sites identified as **Royalston North (21HE0436)** and **Royalston South (21HE0437)** in Minneapolis, your agency has indicated that additional field survey is necessary in order to determine NRHP eligibility and that this additional survey would potentially be combined with Phase III treatment. While we do agree that additional Phase II evaluation work may be warranted for these sites, we believe that the current information is sufficient to demonstrate that the two Royalston sites are **eligible** for

listing in the NRHP under criterion D. If future investigation does take place in the existing Royalston Road street bed and intact archaeological deposits are found, then they may contribute to the significance of these two sites. However, it is our feeling that if additional intact deposits are not found, the two sites would still be eligible.

Again, we thank you for your agency's commitment to completing high-quality identification and evaluation survey reports for the proposed light rail project. In particular, this Phase II archaeological survey and evaluation is an excellent report and provides a significant contribution to the archaeology of the Minneapolis and St. Louis Park metropolitan area.

Feel free to contact me at 651-259-3456 or sarah.beimers@mnhs.org if you have any questions or concerns regarding our review.

Sincerely,

Sarah J. Beimers

Sarah J. Beimers
Manager, Government Programs and Compliance

Minneapolis
Park & Recreation Board

Administrative Offices
2117 West River Road
Minneapolis, MN 55411-2227

Operations Center
3800 Bryant Avenue South
Minneapolis, MN 55409-1000

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May 16, 2014

Dennis Gimmestad
MNDOT Cultural Resources Unit
Office of Environmental Stewardship
Mail Stop 620
395 John Ireland Boulevard
Saint Paul, MN 55155

RE: Southwest Light Rail Transit Project, Minneapolis Park and Recreation Board Comments on April 18, 2014 Consultant Materials

Dear Mr. Gimmestad:

Thank you for the opportunity to review the Section 106 materials provided to Sarah Beimers of the Minnesota State Historic Preservation Office and to participate in the April 30, 2014 consultant meeting for the Southwest Light Trail Transit (SWLRT) Project. Minneapolis Park and Recreation Board (MPRB) staff provide the following comments on the materials:

Table of Potential Effects on Historic Properties (4/15/14)

1) *No 8, Grand Rounds/Lake Calhoun (eligible) HE-MPC-01811:* No adverse effect is indicated for this portion of the Grand Rounds Historic District based on preliminary engineering and station area plans. This property is close to the station area in an area of the city that has poor vehicle, pedestrian and bicycle circulation. The MPRB is concerned that this property will be adversely impacted by changes to traffic and parking patterns that result from the SWLRT project in this area. We request continued consultation on this property throughout the final design and development of the SWLRT, similar No 21, Grand Rounds/Kenwood Parkway (eligible) HE-MPC-01796 in the table.

2) *No 9, Grand Rounds/Cedar Lake Parkway (eligible) HE-MPC-01833:* The MPRB is concerned about the long-term noise and visual intrusion at this intersection and its impacts on adjacent park land. We understand this it is currently a quiet zone. We also understand that this status is unique and are concerned that this designation may not carry over into the SWLRT project. The MPRB is welcomes the opportunity to continue the consultation on this intersection.

3) *No 13, Grand Rounds/Kenilworth Lagoon/Channel (eligible) HE-MPC-1822:* The MPRB agrees with the need for continued consultation on the impacts to the Kenilworth Channel and Lagoon. The size and scale of the proposed bridge structures are not consistent with the design intent and historic cultural landscape of the channel. The MPRB would

like to include the introduction of massive portals on each side of the channel to this review, as well as the noise and vibration impacts that will result from the SWLRT moving in and out of the shallow tunnels and crossing the channel. The MPRB is concerned that it will not be possible to mitigate the impacts of bridge structures and portals that co-locate freight, light rail and trail over the channel. To assist with defining the design intent and historic landscape character of the Kenilworth Channel and Lagoon, the MPRB provides the following information:

The creation of the Kenilworth Lagoon was driven by rising interest in "water sports of all kinds on the lakes and streams," according to Theodore Wirth, writing in his 1944 history of the park system. As early as 1906, Wirth's first year as superintendent, one of his main goals was to connect Isles, Calhoun, Cedar, and Brownie together, an idea called the "Venice of America"—with specific reference to the "beautiful drives and bridges"—in the 1908 Board President's Report.

Excavation of the Kenilworth Lagoon as far as the Minneapolis and St. Louis Railroad was completed in 1911 and extended to Cedar Lake by 1913. In his 1914 Superintendent's Report, Wirth notes the adoption of the name "Kenilworth Lagoon" for the entire water connection between Isles and Cedar, and describes its original design:

> "During the winter season the grounds along the south shore of the lagoon, between Bridge No. 4 [Lake of the Isles Parkway over the Kenilworth Lagoon] and the railroad, were graded, and in the spring seeded and planted, and they have become very attractive in their new garb of lawn and shrubbery. During the fall months the north side of the main lagoon and the banks of the waterway between the railroad bridge and Cedar Lake have also been graded, dressed with loam, planted, and seeded. Walks along both shores have been established leading from Lake of the Isles Boulevard to Cedar Lake Avenue, or what is now called 'Burnham Avenue.' Pipe rails were erected along the walks where they come close to the narrow channel under the railroad bridge.

This work was completed less than a year after similar planting and grading was done around Lake of the Isles and along the channel between Isles and Calhoun. Wirth viewed the dredging and interconnection of the four lakes as a single grand project with similar design parameters. In 1907 he envisioned that the Isles-Calhoun connection would have a "natural picturesque appearance." This design style would have been applied to the entire chain of lakes.

The interconnection of the lakes required six bridges, which were enumerated in the 1909 Annual Report. A competition was held to design them, and designs were selected and built over the Lake Calhoun inlet (bridge #1), Lake of the Isles outlet to Calhoun (bridge #3), and the Kenilworth Lagoon at Lake of the Isles (bridge #4). The railroad bridge over the Isles-Calhoun channel (bridge #2) was built by the railroad. These four bridges were completed in 1911. A design was purchased for the Burnham Road (then

"Cedar Lake Avenue") bridge (bridge #6) but it was never built. Bridge #5, the railroad bridge over the Kenilworth Lagoon at the present day location of the proposed Southwest LRT crossing, was completed in 1913 and considered temporary.

Though in 1909 Wirth agreed to focus efforts and money on the more prominent Bridges 1, 3, and 4, by 1913 he "[hopes that the railroad company will replace [the temporary timber structure] in due time with a better and safer structure." In 1916, two years after completion of the Kenilworth Lagoon with its plantings and trails, the railroad bridge continued to bother Wirth: "I wish to renew my suggestion that the city be requested to build a suitable permanent bridge across the channel on Cedar Lake Avenue (Burnham Road), and that the Minneapolis and St. Louis Railway Company replace the unsightly wooden bridge with a permanent, neat looking concrete structure."

The Kenilworth Lagoon was originally envisioned as a recreational water and pedestrian connection in the picturesque style that predominated throughout the Isles/Calhoun area. All the bridges in the area—including the railroad bridges—were considered key features of that recreational connection. In the 1914 Annual Report, Wirth sets forth his grand vision specifically for the Kenilworth Lagoon:

> "After permanent ornamental bridges have been established to replace the present unsightly wooden structures [of the Burnham Road and Minneapolis and St. Paul Railroad bridges], this waterway between the two lakes will be one of the most attractive features of the entire park system, viewed alike from land or water."

4) *No 14 – 18, Grand Rounds*: The MPRB agrees with the need for continued consultation on the visual impacts of the bridge structures over the Kenilworth Channel from surrounding properties. The MPRB is concerned that the visual impact of the bridges over the Kenilworth Channel from Burnham Road Bridge are not evaluated in the consultation materials. The MPRB recommends that this be included in the consultation.

Again, thank you for the opportunity to review these materials and to participate in future consultation for the Section 106 review of the Southwest Light Trail Transit Project.

Sincerely,

Bruce L. Chamberlain

Bruce L. Chamberlain, ASLA
Assistant Superintendent for Planning

cc: Sarah Beimers, Minnesota State Historic Preservation Office

From:	Byers, Jack P.
To:	Gimmestad, Dennis (DOT)
Cc:	sarah.beimers@mnhs.org; Jacobson, Nani (Nani.Jacobson@metrotransit.org); Hager, Jenifer A; Schaffer, Brian C.
Subject:	Southwest LRT 106 Consultation - Your request for comments from Minneapolis by May 18th
Date:	Friday, May 16, 2014 11:02:32 AM

Dennis,

Thank you for convening all of the consulting parties on the Southwest Transitway Section 106 process on April 30th. We appreciate your presentation of the updated Potential Effects table and we appreciate the research and chronology that the 106 Group presented during that meeting. Both were illuminating and very helpful. Thank you for your hard work on this project.

As you are aware, the City of Minneapolis and the other municipalities along the proposed corridor are currently engaged the Municipal Consent process; one that includes a specific set of proposals from SPO. City of Minneapolis staff are reviewing the SPO package and preparing our comments for subsequent review and consideration by our City Council. City staff are certainly keeping matters related to historic resources in mind as we conduct our Municipal Consent review. However, given that the Municipal Consent process is formally underway, it would be premature for us to comment specifically on 106 matters separately and before our City Council's review and decision on Municipal Consent is completed.

Thank you for understanding. Please feel free to contact me if you have any questions or require further clarification.

Regards,
Jack Byers

Jack Byers, AICP
Long Range Planning Manager

City of Minneapolis – Community Planning and Economic Development
105 Fifth Avenue South – 200
Minneapolis, MN 55401-2534

Office: 612-673-2634
jack.byers@minneapolismn.gov
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Minnesota Historical Society
STATE HISTORIC PRESERVATION OFFICE

May 21, 2014

Mr. Dennis Gimmestad
MnDOT Cultural Resources Unit
395 John Ireland Boulevard, Mail Stop 620
St. Paul, MN 55155-1899

RE: Southwest Light Rail Transit Project
Multiple Communities, Hennepin County
SHPO Number: 2009-0080

Dear Mr. Gimmestad:

Thank you for continuing consultation on the above project. It is being reviewed pursuant to the responsibilities given the State Historic Preservation Officer by the National Historic Preservation Act of 1966 and implementing federal regulations at 36 CFR 800, and to the responsibilities given the Minnesota Historical Society by the Minnesota Historic Sites Act and the Minnesota Field Archaeology Act.

We have completed our review of the consultation package you submitted to our office on 18 April 2014. This submittal included:

- Consultation letter dated 18 April 2014
- Table of Potential Effects on Historic Properties
- Photo Log of Historic Properties
- Historic Properties Maps 1-6
- Attachment A: Additional Project Information in the Vicinity of Hopkins M&StL Depot
- Attachment B: Additional Project Information in the Vicinity of Cedar Lake Parkway/Grand Rounds Historic District
- Preliminary Track Drawings: East Segments 1-4

In addition to reviewing these materials, we participated in the Section 106 Consulting Parties meeting held at the Southwest Project Office on 30 April 2014. Thank you for convening all of the consulting parties for this meeting, it was very beneficial. Our comments and recommendations are outlined below.

Archaeological Phase II Evaluation
We concur with your determination that archaeological sites 21HE0436 and 21HE0437 are eligible for listing in the National Register of Historic Places (NRHP) under Criterion D. It is our understanding that your agency will complete additional Phase II investigations at these sites in order to determine site boundaries which will assist in the resolution of potential adverse effects to these sites. We agree with this approach.

Area of Potential Effects Revisions
We have taken into account the various adjustments to the project's area of potential effect (APE) which you have summarized in your letter and are illustrated on the Historic Properties Maps. As you have indicated, one of the most significant adjustments to the project APE is in the location of the new light rail bridge crossings over the Kenilworth Lagoon/Channel. We appreciate the fact that, due to the change in scope for this segment of the project, the APE has been expanded in order to comprehensively apply the criteria of adverse effect to significant characteristics of the historic Grand Rounds. We look forward to continuing consultation regarding potential effects to historic properties in these additional areas.

Preliminary Project Effects Assessments
You have indicated that the assessments of potential effects on historic properties have been determined based upon preliminary project engineering plans and that final adverse effect determinations will be made by the Federal Transit Administration. In general, we agree with many of the assessments that have been completed thus far and it is our opinion that these assessments will provide a basis for provisions to be included in a Section 106 agreement document, perhaps in the form of a programmatic agreement, for the Southwest Light Rail Transit Project. Our comments and recommendations on your April 18th correspondence are outlined below:

- Based on our review of the current preliminary engineering and station area plans, we concur with your determination that the project will not adversely affect the following nine (9) properties: Hopkins City Hall (Hopkins), Hoffman Callan Building (St. Louis Park), Minikahda Club (Minneapolis), Grand Rounds-Lake Calhoun Segment (Minneapolis), Mac Martin House (Minneapolis), Dunwoody Institute (Minneapolis), Minneapolis St. Paul & Manitoba Railroad Historic District (Minneapolis), Osseo Branch/Minneapolis St. Paul & Manitoba Railroad Historic District (Minneapolis), and the Minneapolis Warehouse District (Minneapolis). We agree that no further consultation is required for these properties unless subsequent project plan development results in effects to these historic properties.
- Please Note: Based upon discussions at the April 30th consulting parties meeting, we do not concur with the "no adverse effect" finding for the CM&StP Saint Louis Park Depot (Saint Louis Park), due to the fact that project plans have changed in the vicinity of this historic property which may necessitate additional effect assessment and/or design changes. We look forward to continuing consultation at this location.
- We agree with your agency's determination that avoidance of adverse effects for the following four (4) properties may be possible through appropriate design modifications and/or protection measures during construction: M&StL Hopkins Depot (Hopkins), Peavey-Haglin Experimental Concrete Grain Elevator (Saint Louis Park), Grand Rounds-Cedar Lake Parkway Segment (Minneapolis), and Archaeological Site 21HE0409. We will continue to consult with your agency as project plans are further developed.
- In regards to the proposed location of the two (2) new Lake of the Isles-Cedar Lake Channel Bridges, you have indicated that we will continue to consult with your agency on ways to minimize or avoid adverse effects to the six (6) historic properties identified within the APE for these bridges. These historic properties include: the Kenilworth Lagoon/Channel, Cedar Lake, Lake of the Isles, Lake of the Isles Parkway, and Park Board Bridge No. 4 which are contributing elements to the Grand Rounds, as well as the Lake of the Isles Residential Historic District. We agree that avoidance or minimization of adverse effects is the most desirable outcome, but we

also recommend that continued consideration be given to potential mitigation of any adverse effects resulting from this segment of the project's construction.

- We agree with your recommendation for continued consultation regarding avoidance or minimization of potential adverse effects which may result from construction of the Penn LRT Station. It is our opinion that your agency should continue to consider potential mitigation of adverse effects at this station location as well. We agree that further consideration of effects resulting from the design and development of access routes between the Penn LRT Station and Kenwood Parkway will need to be assessed. The four (4) historic properties located within the Penn LRT Station APE include: the Kenwood Parkway Historic District, and three contributing elements to the Grand Rounds which include Kenwood Parkway, Kenwood Park, and Kenwood Water Tower. You have also indicated that additional assessment of potential auditory effects will be completed for the northern section of the Kenwood Parkway Historic District.
- We will continue to consult with your agency and consulting parties in the City of Hopkins regarding continued assessment of potential effects to the Hopkins Commercial Historic District resulting from the Downtown Hopkins LRT Station area development. We agree that a provision for listing the historic district in the National Register of Historic Places is an acceptable strategy for avoiding adverse effects and look forward to continuing consultation with your agency and the City of Hopkins.
- We agree with your determination that archaeological sites 21HE0436 and 21HE0437 will be directly affected by construction of the Royalston LRT Station and that avoidance of adverse effects has been considered and deemed infeasible. Therefore, we need to further consult regarding minimizing or mitigating for the adverse effect. Perhaps through the additional archaeological survey which is to be completed in the near future. The boundaries of these sites will be clarified which may allow for avoidance of direct impacts and continued preservation of site elements. We agree that a logical mitigation strategy for destruction of these sites will be a provision in a future agreement document for Phase III Data Recovery. We also recommend continued consultation with our office and consulting parties from the City of Minneapolis to develop additional relevant mitigation strategies.
- We agree with your determination that impacts to the following four (4) non-contributing elements, either directly or indirectly, will not adversely affect the Grand Rounds: the two (2) Railroad Bridges over Kenilworth Lagoon, the Burnham Road Bridge, and The Parade.

Again, thank you for your agency's efforts in bringing all of the Section 106 consulting parties together on April 30th to discuss the preliminary effects assessments, the proposed light rail route from Hopkins to Minneapolis, as well as providing a project update regarding the proposed Lake of the Isles-Cedar Lake Channel Bridges. We are aware of the fact that your agency will be in receipt of comment letters from the various consulting parties regarding the preliminary effects assessments and we look forward to continuing consultation as all comments and recommendations are taken into account.

If you have any questions or concerns regarding this comment letter, please feel free to contact me at 651-259-3456 or sarah.beimers@mnhs.org.

Sincerely,

Sarah J. Beimers

Sarah Beimers, Manager
Government Programs & Compliance

Minnesota Historical Society
STATE HISTORIC PRESERVATION OFFICE

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June 5, 2014

Mr. Dennis Gimmestad
MnDOT Cultural Resources Unit
395 John Ireland Boulevard, Mail Stop 620
St. Paul, MN 55155-1899

RE: Southwest Light Rail Transit Project
Multiple Communities, Hennepin County
SHPO Number: 2009-0080

Dear Mr. Gimmestad:

Thank you for continuing consultation on the above project. It is being reviewed pursuant to the responsibilities given the State Historic Preservation Officer by the National Historic Preservation Act of 1966 and implementing federal regulations at 36 CFR 800, and to the responsibilities given the Minnesota Historical Society by the Minnesota Historic Sites Act and the Minnesota Field Archaeology Act.

We have completed our review of your correspondence dated 2 April 2014 in which you provide clarification regarding the historic property boundaries for segments of the Grand Rounds and the M&StL RR Depot, properties previously determined eligible for listing in the National Register of Historic Places and located within the area of potential effects (APE) for the Southwest Light Rail Transit Project. Our comments are summarized below:

- **Grand Rounds-Kenilworth Lagoon/Channel (HE-MPC-1822)** – we concur with your determination of the historic property boundary as described in your correspondence and illustrated on the map dated 02/13/14;
- **Grand Rounds-Cedar Lake Parkway (HE-MPC-1833)** – we concur with your determination of the historic property boundary as described in your correspondence and illustrated on the map dated 02/13/14;
- **M&StL RR Hopkins Depot (HE-HOC-0014)** – we concur with your determination of the historic property boundary as described in your correspondence and illustrated on the map dated 02/13/14.

We look forward to continuing consultation on this important project. If you have any questions or concerns regarding this comment letter, please feel free to contact me at 651-259-3456 or sarah.beimers@mnhs.org.

Sincerely,

Sarah J. Beimers

Sarah Beimers, Manager
Government Programs & Compliance

Minnesota Historical Society

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STATE HISTORIC PRESERVATION OFFICE

June 5, 2014

Mr. Dennis Gimmestad
MnDOT Cultural Resources Unit
395 John Ireland Boulevard, Mail Stop 620
St. Paul, MN 55155-1899

RE: Southwest Light Rail Transit Project
Multiple Communities, Hennepin County
SHPO Number: 2009-0080

Dear Mr. Gimmestad:

Thank you for continuing consultation on the above project. It is being reviewed pursuant to the responsibilities given the State Historic Preservation Officer by the National Historic Preservation Act of 1966 and implementing federal regulations at 36 CFR 800, and to the responsibilities given the Minnesota Historical Society by the Minnesota Historic Sites Act and the Minnesota Field Archaeology Act.

We have completed our review of additional transit project materials received in our office on 8 May 2014 which included:

- Correspondence letter dated 8 May 2014
- Report entitled *Phase I/Phase II Architectural History Investigation, Southwest LRT Project, Hennepin County, Minnesota: Volume Six, Supplemental Report Number Three (SDEIS)* (CH2M HILL, April 2014)
- Report entitled *Phase 1a Archaeological Investigation: Southwest Light Rail Transit, Hennepin County, Minnesota: SDEIS Areas Eden Prairie Segment, Hopkins Operations and Maintenance Facility, St. Louis Park/Minneapolis Segment* (CH2M HILL, March 2014)

You have indicated that these additional cultural resources studies have been completed as a result of scope adjustments which have been made to the proposed light rail transit project and that a Supplemental Draft Environmental Impact Statement (SDEIS) is currently being finalized.

Based upon information provided to us at this time, we concur with your determination that, in the SDEIS project areas surveyed for architecture/history resources, no additional properties listed or eligible for listing in the National Register of Historic Places (NRHP) were identified. Also, we concur with the determination that Phase 1 archaeological surveys should be completed for Areas A, B, and C identified in the Phase 1a archaeological report and that outside these three (3) areas targeted for survey, there are no additional NRHP listed or eligible properties identified.

We look forward to continuing consultation on this important project. If you have any questions or concerns regarding this comment letter, please feel free to contact me at 651-259-3456 or sarah.beimers@mnhs.org.

Sincerely,

Sarah J. Beimers

Sarah Beimers, Manager
Government Programs & Compliance

Minnesota Historical Society

STATE HISTORIC PRESERVATION OFFICE

July 3, 2014

Mr. Dennis Gimmestad
MnDOT Cultural Resources Unit
Transportation Building, MS620
395 John Ireland Boulevard
St. Paul, MN 55155

Re: Southwest Transitway Project
Eden Prairie, Minnetonka, Edina, Hopkins, St. Louis Park & Downtown Minneapolis
Hennepin County
SHPO Number: 2009-0080

Dear Mr. Gimmestad:

Thank you for your letter of 2 June 2014 that provided clarification on additional Phase II investigations in the vicinity of archaeological sites 21HE0436 and 21HE0437 and clarification on the properties that will require further consultation on design and/or protective measures to avoid adverse effects as project planning moves forward.

We look forward to continuing consultation on this project. Please feel free to contact me at 651-259-3456 or sarah.beimers@mnhs.org if you have any questions or concerns regarding our review.

Sincerely,

Sarah J. Beimers, Manager
Government Programs and Compliance

cc: Greg Mathis, MnDOT CRU

U.S. Department
of Transportation
**Federal Transit
Administration**

REGION V
Illinois, Indiana,
Michigan, Minnesota,
Ohio, Wisconsin

200 West Adams Street
Suite 320
Chicago, IL 60606-5253
312-353-2789
312-886-0351 (fax)

July 9, 2014

Victoria Rutson
Surface Transportation Board
Office of Environmental Analysis
395 E Street, SW
Washington, DC 20423

Re: Rescinding Cooperating Agency Status for the Southwest Light Rail Transit (SWLRT) Project and Invitation to Become a Participating Agency for the SWLRT Project

Dear Ms. Rutson:

Federal Transit Administration (FTA), in cooperation with the Metropolitan Council, is developing a public transit project that will benefit the residents of the Minneapolis/St. Paul Region. A Draft Environmental Impact Statement (DEIS) was published on October 12, 2012 with the public comment period ending on December 31, 2012. The Surface Transportation Board (STB) is currently included as a cooperating agency for the SWLRT (METRO Green Line Extension) Project under the National Environmental Policy Act (NEPA). Due to modifications to the project since publication of the DEIS, the FTA and Metropolitan Council intend to publish a Supplemental Draft Environmental Impact Statement (SDEIS). It is anticipated that the SDEIS scope will include, but not be limited to, an evaluation of the following areas: Eden Prairie Light Rail Transit (LRT) alignment and stations, LRT Operations and Maintenance Facility (OMF) site, freight rail alignments (i.e., Re-location and Co-location), and other areas where FTA and the Metropolitan Council determine that there is a need to be supplemented with additional information which was not included in Project's October 2012 DEIS. This letter serves to rescind STB as a cooperating agency due to adjustments in the project scope made since publication of the DEIS in October 2012.

On April 9, 2014, the Metropolitan Council adopted a project scope and budget which includes retaining current operations for freight rail on the Bass Lake Spur and Kenilworth Corridor. As STB noted in their comment letter on the Draft EIS from December 2012, "[STB] board approval is not required to improve, upgrade, or realign an existing line without extending the territory or markets that the railroad serves." Under the LPA, there would be the following general areas of freight rail modifications:

- Existing freight rail tracks would be shifted to the north approximately 40-45 feet on the Canadian Pacific (CP)-owned Bass Lake Spur, beginning in Hopkins and extending through St. Louis Park. The freight rail and light rail shift would continue into Minneapolis on the Hennepin County Regional Railroad Authority (HCRRA)-owned Cedar Lake Junctions (commonly referred to as the Kenilworth Corridor) (see Exhibits 1-3). This shift allows the proposed light rail alignment to be located south of the freight rail tracks thereby providing better LRT station connections to local activity centers.

- A portion of the northern leg of the existing Skunk Hollow switching wye between the Bass Lake Spur and Oxford Street would be removed and replaced with a new southerly connection between the Bass Lake Spur and the MN&S Spur (which is also owned by CP) that would cross over the proposed light rail alignment on a structure, which would allow freight trains traveling on the Bass Lake Spur tracks to continue to access the MN&S Spur tracks (see Exhibit 3)[1].

The Supplemental Draft EIS, planned for publication later this year, includes the above adjustments of freight rail as part of the Locally Preferred Alternative (LPA). *FTA believes the changes made to the LPA no longer require STB approval. FTA is seeking concurrence to rescind cooperating agency status, eliminating the need for STB's role as a cooperating agency under NEPA, as previously identified under 40 CFR § 1501.6.*

Pursuant to Section 6002 of the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) (23 USC § 139), *FTA would like to invite STB to become a participating agency in the on-going environmental review process for the project.* FTA believes STB may have an interest in this project because of the operational effects to freight rail carriers located within the project corridor. STB does not have to accept this invitation. *If STB elects not to become a participating agency, STB must decline this invitation in writing by August 25, 2014*, indicating that STB has no jurisdiction or authority with respect to the project, no expertise or information relevant to the project, and does not intend to submit comments to the project. The declination may be transmitted electronically to Mr. William Wheeler of the FTA at william.wheeler@dot.gov; please include the title of the official responding.

Please contact me if you have questions or need additional information. Thank you for your support and expertise provided to the project.

Sincerely,

for Marisol R. Simón
Regional Administrator

Cc: Maya Sarna, FTA HQ
Nani Jacobson, SWLRT Project Office

Enclosures: Exhibit 1: Proposed Southwest LRT Alignment
Exhibit 2: Freight Rail Owners and Operators in the Southwest LRT Project Area
Exhibit 3: Proposed Freight Rail Modifications

[1] Removal of a portion of the northern leg of the Skunk Hollow switching wye would be required to accommodate the placement of the light rail alignment south of the freight rail alignment on the existing northern switching wye alignment. The southern leg of the Skunk Hollow switching wye would remain in place, providing the continuation of freight rail service to the Robert B. Hill Company salt facility at the west end of the switching wye.

Exhibit 1. Proposed Southwest LRT Alignment

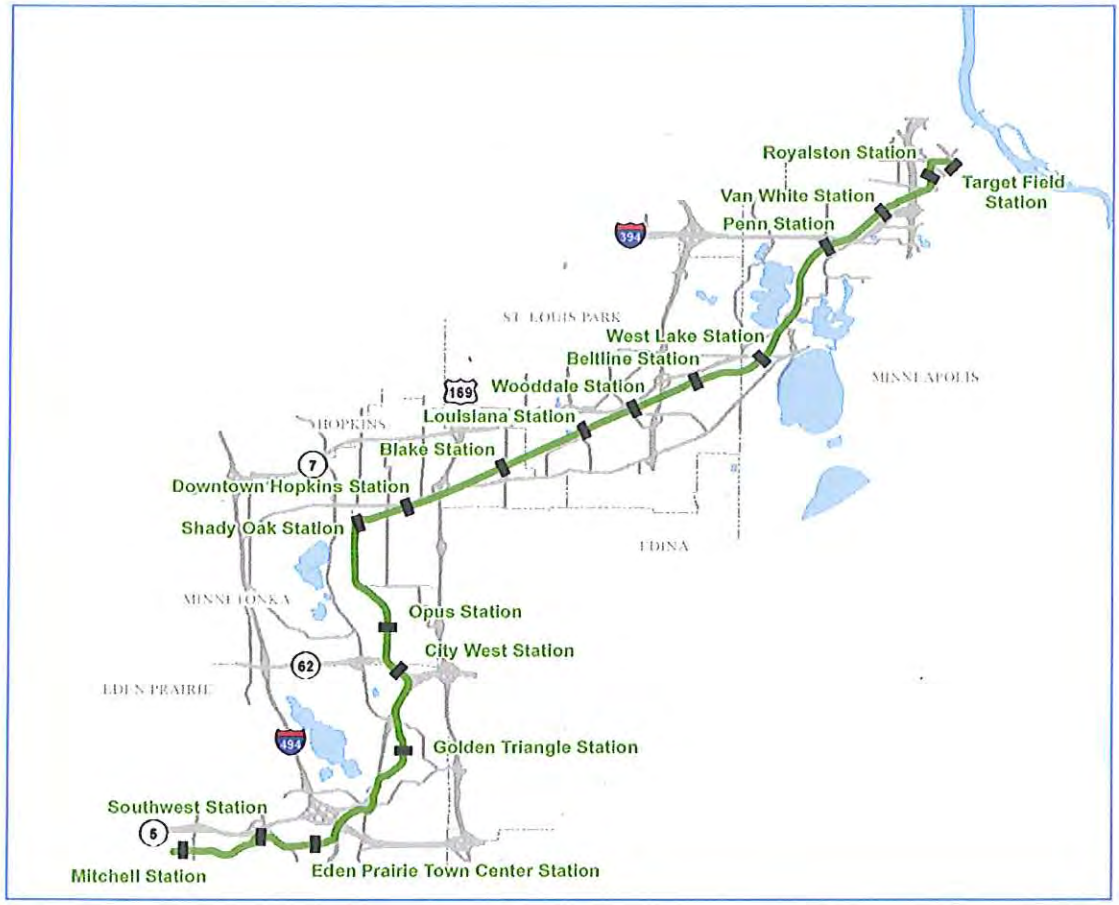


Exhibit 2. Freight Rail Owners and Operators in the Southwest LRT Project Area

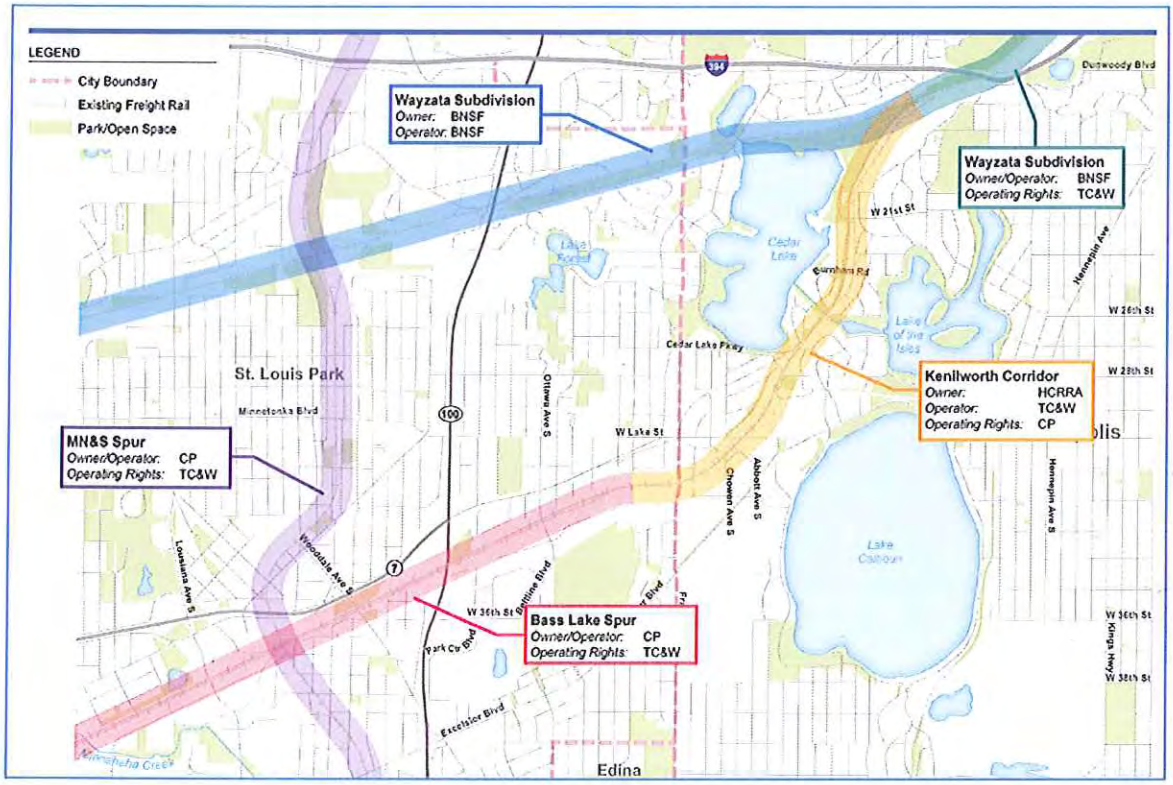
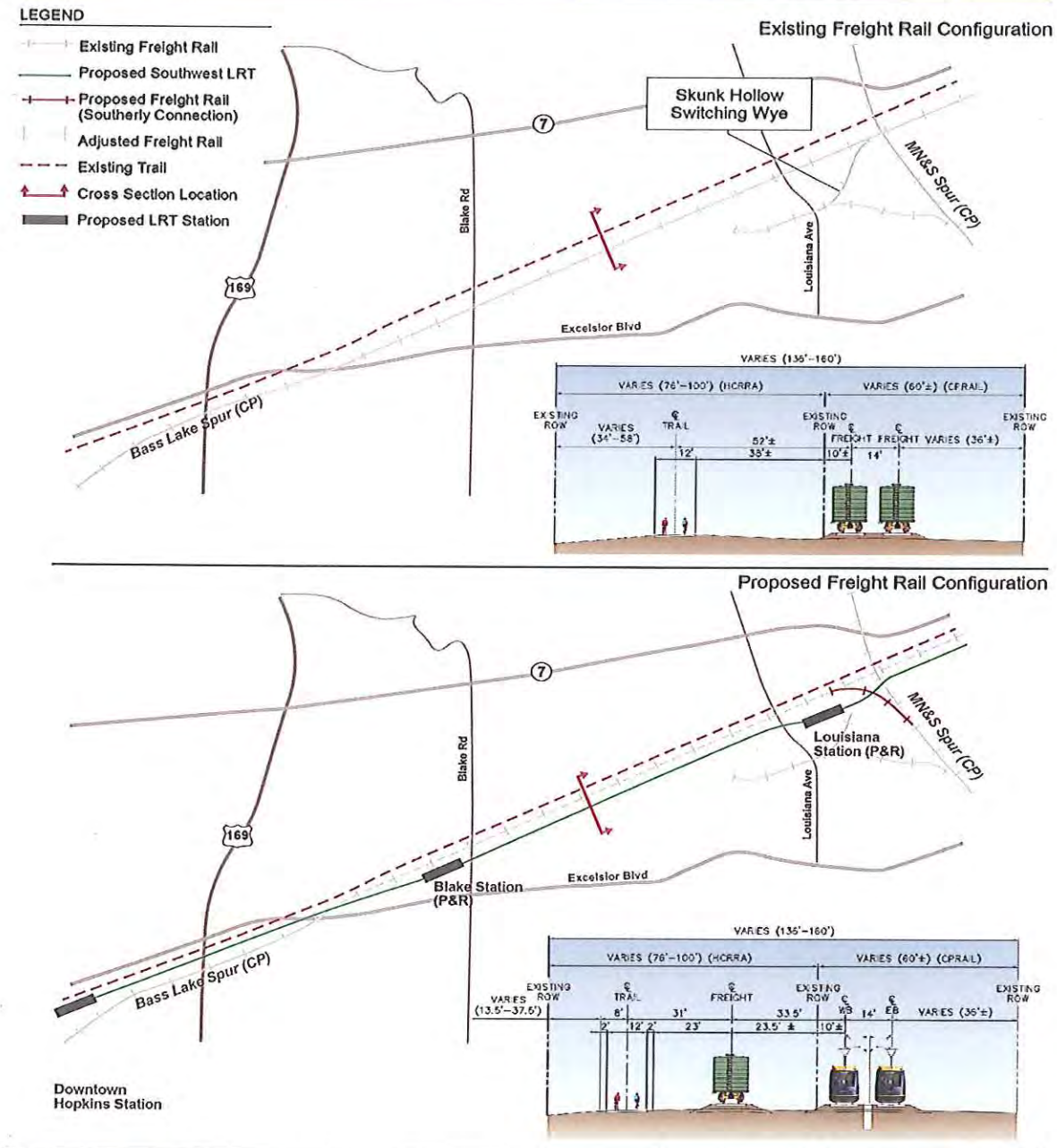


Exhibit 3. Proposed Freight Rail Modifications



SOUTHWEST	Southwest LRT Supplemental Draft EIS Proposed Freight Rail Modifications	Exhibit 2.2-5	NORTH 0 0.75 1.5 Miles	METROPOLITAN COUNCIL

-----Original Message-----
From: Vicki.Rutson@stb.dot.gov [mailto:Vicki.Rutson@stb.dot.gov]
Sent: Friday, August 22, 2014 12:09 PM
To: Sarna, Maya (FTA)
Cc: Wheeler, William (FTA)
Subject: RE: SWLRT: Rescinding of Cooperating Agency status and Invitation to Participate in Environmental Review Process

Maya, since it appears that the only potential Board licensing action would involve trackage rights (Mike Higgins will be getting back to you on that issue), there's no need for the Board to be involved in the environmental review--under the Board's environmental rules, trackage rights are categorically excluded from NEPA review by the Board.

Please call or email if this doesn't make sense.

Best, Vicki

Victoria Rutson
Director, Office of Environmental Analysis Surface Transportation Board
(202) 245-0295 (phone)
(202) 245-0454 (fax)

U.S. Department
of Transportation

**Federal Railroad
Administration**

1200 New Jersey Avenue, SE.
Washington, D.C. 20590

OCT - 6 2014

Mr. Mark W. Fuhrmann
New Starts Program Director–Metro Transit
SWLRT Project Office
6465 Wayzata Boulevard, Suite 500
St. Louis Park, MN 55426

Re: Federal Railroad Administration Safety Jurisdiction–Proposed Southwest Light Rail Transit Line

Dear Mr. Fuhrmann:

I write in response to the Metropolitan Council's (Met Council) request for a preliminary jurisdiction determination concerning the proposed Southwest Light Rail Transit Line (SWLRT), described as a light rail transit (LRT) extension to its METRO system in the Minneapolis-St. Paul Twin Cities region of Minnesota. Based upon the information that Met Council provided in its letters dated June 12, 2014, and August 15, 2014, the Federal Railroad Administration (FRA) has concluded that the proposed SWLRT will be an urban rapid transit (URT) operation; therefore, FRA will not exercise its safety jurisdiction over the SWLRT, except to the extent that it is necessary to ensure railroad safety at any limited shared connections between the SWLRT and other railroad carriers that operate on the general railroad system of transportation (general system),[1] as discussed below.

I. General Factual Background

Met Council's Metro Transit operating division operates and maintains the METRO system (described by Met Council as an LRT system) that serves the Minneapolis-St. Paul Twin Cities region of Minnesota. The existing METRO system consists of three lines, the METRO Blue Line, the METRO Red Line,[2] and the METRO Green Line.[3] The Blue Line is 12 miles in length with 19 stations between Target Field in

[1] The "general railroad system of transportation" is defined as "the network of standard gage track over which goods may be transported throughout the nation and passengers may travel between cities and within metropolitan and suburban areas." Appendix A to 49 C.F.R. Part 209. Portions of the network that lack a physical connection may still be part of the general system by virtue of the nature of the operations that occur. See id.

[2] The METRO Red Line is a bus rapid transit line with five stations providing service from the Mall of America to and from points to the south.

[3] The Green Line opened for revenue operations on June 14, 2014.

downtown Minneapolis and the Mall of America in Bloomington.[4] The Green Line is 11 miles in length with 18 stations offering service between Target Field and downtown St. Paul, sharing 5 stations with the Blue Line and bringing the METRO LRT system's total to 22 miles of exclusive right-of-way and 37 stations.

II. General Description of the SWLRT

Based upon the written correspondence from Met Council, FRA has the following understanding of the SWLRT. The SWLRT is a proposed extension of the Green Line from downtown Minneapolis to Eden Prairie, which would add approximately 15.8 miles of standard gage revenue service track and 17 new stations to the region's METRO transit system. The SWLRT will connect to the Green Line at the Target Field/Interchange station in the central business district of downtown Minneapolis and will terminate at Mitchell Station in Eden Prairie. The SWLRT will be located completely within Hennepin County, Minnesota, extending from downtown Minneapolis and serving the communities of St. Louis Park, Hopkins, Minnetonka, and Eden Prairie.

SWLRT service is proposed to operate 22 hours per day, 7 days per week. The SWLRT will provide service every 10 minutes during peak periods[5] on weekdays, every 15-20 minutes in the early morning and evening hours,[6] and every 30-60 minutes in the late evening hours.[7] On weekends and holidays, the service will have 10-minute headways between 9:00 a.m. and 7:00 p.m., with 15-20 minute headways on mornings from 4:30 a.m. to 9:00 a.m. and evenings from 7:00 p.m. to 9:00 p.m., and 30-60 minute headways in the late evening hours between 11:00 p.m. and 2:00 a.m.

Seventeen new rail stations will be located on the SWLRT. Met Council chose the station locations based primarily on employment concentrations, strong connections to arterial bus service, compatibility with existing and future land uses, connectivity to walkable urban neighborhoods with multiple activity centers, as well as for the potential for transit-oriented development. Met Council estimates that the non-work-related trips[8] on the SWLRT will constitute approximately 15 percent of the total trips, while it

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[4] In addition, the Bottineau Transitway, currently under development and expected to be operational as soon as 2019, is a proposed 13-mile extension to the Blue Line, adding approximately 10 stations, connecting at the Target Field/Interchange station in the central business district of downtown Minneapolis and terminating at 97th Avenue, the site of Target Corporation's north campus. FRA provided a jurisdiction determination on September 19, 2013, explaining that the Bottineau Transitway, as proposed, is considered a URT operation with limited connections to the general system.

[5] The peak period runs from 5:30 a.m. to 10:00 p.m.

[6] The early morning hours are between 4:00 a.m. and 5:30 a.m. The evening hours are between 9:00 p.m. and 11:00 p.m.

[7] The late evening hours are between 11:00 p.m. and 2:00 a.m.

[8] These trips will be comprised of non-home-based errands, shopping, and entertainment-related trips.

estimates that the work-related trips[9] will constitute the remaining 85 percent of the total trips.

Three freight railroad carriers (freight rail) own or operate lines in the area in which SWLRT will be operated: Canadian Pacific Railway (CP); BNSF Railway Company (BNSF); and Twin Cities & Western Railroad Company (TC&W). There are four active freight lines within the area: the CP-owned Bass Lake Spur; the CP-owned Minneapolis, Northfield and Southern (MN&S) Spur; the Cedar Lake Junction (Kenilworth Corridor), owned by Hennepin County Regional Railroad Authority (HCRRA); and a piece of the BNSF-owned Wayzata Subdivision.

Approximately 7.7 miles of the proposed SWLRT line, between the 5th Avenue crossing in Hopkins and Royalston Avenue in Minneapolis, will be constructed adjacent to operating freight rail tracks in the CP-owned Bass Lake Spur, HCRRA-owned Kenilworth Corridor, and BNSF-owned Wayzata Subdivision. Approximately 3.9 miles of the proposed SWLRT alignment, between the 5th Avenue crossing in Hopkins and Beltline Station, will be constructed adjacent to CP-owned tracks. Approximately 2.3 miles of the proposed SWLRT alignment, between the Beltline Station and Cedar Lake Junction near Penn Station, will be constructed adjacent to HCRRA-owned tracks. Finally, from Cedar Lake Junction near Penn Station to Royalston Avenue, the SWLRT will run adjacent to BNSF-owned tracks for approximately 1.5 miles.

The SWLRT will not share track with railroad carriers that operate on the general system. There will be no shared stations between the SWLRT and freight rail, and no shared freight rail-SWLRT rail (diamond) at-grade crossings. Rather, the SWLRT's vehicles will operate on their own double mainline tracks, which will be approximately 33.5 feet (measured from center line to center line) away from freight rail on most areas along the SWLRT.[10]

There are five proposed highway-rail crossings at grade through which freight rail traffic will operate in the corridor that it will share with the SWLRT. The highway-rail grade crossings that will be shared between freight rail and the SWLRT will be located at 5th Avenue South, Blake Road North, Wooddale Avenue, Beltline Boulevard, and 21st Street.[11] These crossings are proposed to be signalized crossings with gates.[12] A single set

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[9] These trips will originate at the passenger's home and will terminate at the passenger's place of employment or at an institutional campus.

[10] The distance separating the SWLRT track from freight rail track varies from 25 feet to 110 feet on CP's Bass Lake Spur, from 20 feet to 50 feet on HCRRA's Kenilworth Corridor, and from 22.5 feet to over 50 feet on BNSF's Wayzata Subdivision. Crash walls are proposed at locations closer than 25 feet.

[11] Note that the crossing at 8th Avenue South is only ¼ mile west of the 5th Avenue South crossing, but the freight rail track does not cross the highway at this location.

[12] The existing signal control at the 5th Avenue South, Blake Road North, Wooddale Avenue, and Beltline Boulevard freight highway-rail grade crossings is composed of cantilevered flashers and gates. The existing signal control at the 21st Street freight highway-rail grade crossing is composed of crossbucks and stop signs.

of gate arms and flashing lights will be used at Blake Road North, Wooddale Avenue, Beltline Boulevard, and 21st Street[13] for protection of both the freight rail and the SWLRT operations. Train detection circuitry on the freight tracks will be interfaced with the SWLRT's grade crossing warning system at the shared crossings. Similarly, train detection circuitry on the SWLRT's tracks will be interfaced with the freight railroad carriers' grade crossing warning systems at the shared crossings. The 5th Avenue South highway-rail grade crossing has approximately 200 feet of separation between the SWLRT track centerline and CP's track centerline. Each crossing at 5th Avenue South will have its own active warning device consisting of flashing lights and gates. There will be an interconnection between the SWLRT bungalow and the CP bungalow to facilitate the operation of both sets of warning devices. Crossing details will be evaluated and further refined as the project progresses.[14] Freight railroad carriers currently have maintenance responsibilities for the highway-rail grade crossing warning systems.[15]

The CP-owned Bass Lake Spur[16] currently consists of Class 2 freight track with approximately 19-20 TC&W trains per week, operating at a maximum authorized operating speed of 25 miles per hour (mph). TC&W also operates 19-20 trains through the Kenilworth Corridor,[17] which is comprised of Class 2 track at a maximum speed of 10 mph. The MN&S Spur currently has Class 1 freight track and a maximum operating speed of 10 mph, with approximately 10 CP trains per week. The Wayzata Subdivision currently has Class 4 freight track with a maximum authorized operating speed of 45 mph, with approximately 19 BNSF trains per week. The maximum proposed operating speed for the SWLRT is 55 mph.

The SWLRT would also have five highway-rail grade crossings that would be grade separated from freight rail: Excelsior Boulevard, Trunk Highway 100, Oxford

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[13] The 21st Street crossing is currently subject to an active 24-hour Pre-Rule Quiet Zone per 49 C.F.R. § 222.43. Met Council believes that the construction along the corridor at the 21st Street crossing would make this a Partial Pre-Rule Quiet Zone during working hours. Met Council anticipates that the 21st Street crossing would become a New Quiet Zone upon completion due to the addition of active warning devices, roadway medians, and the operation of SWLRT trains to the existing crossing.

[14] The City of St. Louis Park and the City of Hopkins have expressed interest in implementing new Quiet Zones at shared freight rail and SWLRT crossings in their communities.

[15] It is proposed that maintenance responsibilities for the highway-rail grade crossing warning systems will be shared by the SWLRT and the freight railroad carriers. It is proposed that freight railroad carriers will provide and maintain the active warning devices for freight rail tracks. Similarly, it is proposed that the SWLRT will provide and maintain the active warning devices for its tracks. Negotiations with freight carriers regarding future maintenance responsibilities on the shared crossings and which entity will provide and maintain the active warning devices will occur as the project progresses through the Federal Transit Administration (FTA) New Starts process.

[16] The shared freight-SWLRT highway-rail grade crossings of 5th Avenue South, Blake Road North, Wooddale Avenue, and Beltline Boulevard are located on the CP-owned Bass Lake Spur.

[17] The shared freight-SWLRT highway-rail grade crossing of 21st Street in Minneapolis is located on the HCRRA-owned Kenilworth Corridor.

Street, Louisiana Avenue, and Cedar Lake Parkway.[18] Finally, there are currently two at-grade recreational trail crossings on the corridor east of Beltline Boulevard and west of Cedar Lake Junction, but the crossings are proposed to be permanently closed.

Met Council has worked closely with FTA Region V and Headquarters staff and representatives of CP, BNSF, TC&W, and FRA to work out the details and design of the SWLRT. Per 49 C.F.R. Part 659, the Minnesota Department of Public Safety[19] will provide State oversight regarding the operation of the SWLRT.

III. The Legal Framework for FRA's Safety Jurisdiction Policy

The Federal railroad safety laws apply to "railroad carriers." A "railroad carrier" is defined, in pertinent part, as a person providing railroad transportation. See 49 U.S.C. § 20102(3). The term "railroad" is defined broadly and includes any form of nonhighway ground transportation that runs on rails or electromagnetic guideways. See 49 U.S.C. § 20102(2)(A). The lone exception is for rapid transit operations in an urban area that are not connected to the general system. See id. at § 20102(2)(B). Outside of this one exception, and minor exceptions related to the applicability of the safety appliance laws, see id. at § 20301(b), FRA has safety jurisdiction, delegated from the Secretary of Transportation, over any type of railroad carrier (railroad), regardless of the type of equipment that it uses or its connection to the general system. See 49 C.F.R. § 1.89. Commuter or other short-haul railroad passenger service in a metropolitan or suburban area (a commuter or short-haul railroad) is within FRA's jurisdiction, even if it is not connected to another railroad. See 49 U.S.C. § 20102(2)(A)(i); see also Appendix A to 49 C.F.R. Part 209. Moreover, commuter and other short-haul railroads are considered to be part of the general system, regardless of their connections to the general system. See Appendix A to 49 C.F.R. Part 209.

Because Congress did not provide definitions for the statutory terms "commuter or other short-haul railroad passenger service in a metropolitan or suburban area" and "rapid transit operations in an urban area," FRA has set forth its policy on how it will apply those terms in its "Statement of Agency Policy Concerning Jurisdiction over the Safety of Railroad Passenger Operations and Waivers Related to Shared Use of the Tracks of the General Railroad System by Light Rail and Conventional Equipment." See 65 Fed. Reg. 42,529 (July 10, 2000) (amending Appendix A to 49 C.F.R. Part 209) (FRA's Policy Statement).[20] In FRA's Policy Statement, FRA establishes certain presumptions regarding

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[18] The Cedar Lake Parkway crossing is currently subject to an active 24-hour Pre-Rule Quiet Zone per 49 C.F.R. § 222.43. Met Council believes that the construction along the corridor at this crossing would make this a Partial Pre-Rule Quiet Zone during working hours. Met Council anticipates that the 24-hour Pre-Rule Quiet Zone would be in effect following construction activities at the Cedar Lake Parkway crossing.

[19] The Minnesota Department of Public Safety, the State Safety Oversight Agency (SSOA) in Minnesota, oversees all fixed guideway transit systems in the State that are not part of the general system. Met Council will coordinate with the Minnesota Department of Public Safety as the project progresses.

[20] See also Appendix A to 49 C.F.R. Part 211, "Statement of Agency Policy Concerning Waivers Related to Shared Use of Trackage or Rights-of-Way by Light Rail and Conventional Operations."

passenger rail operations. First, if Congress has enacted a law that describes a passenger rail system as commuter rail, FRA will follow that mandate. No such statutory mandate, however, exists with respect to the SWLRT. Second, if an operation is a subway or elevated system that has its own separate track system, has no highway-rail grade crossings, and moves passengers from station to station within an urban area, then FRA will presume that the system is URT. The SWLRT will not be a subway or elevated operation, and it will have five shared highway-rail grade crossings. Therefore, it is not presumptively URT. As a result, in situations such as this when neither presumption applies, FRA looks at "all of the facts pertinent to a particular operation to determine its proper characterization."[21] Appendix A to 49 C.F.R. Part 209.

According to FRA's Policy Statement, the proper characterization of a rail system depends upon three general factors: (1) the geographic scope of the rail operation; (2) the primary function of the rail operation; and (3) the frequency of the rail operation's service. In general, FRA will consider an operation to be a commuter railroad if its primary function involves transporting commuters to and from their work within a metropolitan area. Moving people from point to point within a city's boundaries is, at most, an incidental portion of a commuter railroad's operations. A commuter railroad serves an urban area, its suburbs, and more distant outlying communities in the greater metropolitan area. A key indicator of a commuter system is that the vast majority of the system's trains are operating in the morning and evening peak periods, with only a small number of trains operating at other hours.

By contrast, FRA will consider an operation to be URT if that operation serves an urban area (and may also serve its suburbs), and a primary function of the operation is moving people from point to point within the boundaries of the urban area, where there are multiple station stops for that purpose. Additionally, URT operations typically provide frequent train service, even outside of the morning and evening peak periods. Finally, while the type of equipment used by such a system is not determinative of its status, the equipment ordinarily associated with street railways, trolleys, subways, and elevated railways is the equipment that is most often used in URT operations.

Even if FRA determines that an operation is URT, FRA will exercise jurisdiction over the URT operation, to the extent that it is connected to the general system. See Appendix A to 49 C.F.R. Part 209. In situations in which a URT operation has a minor connection to the general system, FRA will exercise limited jurisdiction over the URT system and only to the extent necessary to ensure safety at the points of connection for that system, the general system railroad, and the public. For example, when a URT operation shares highway-rail grade crossings with a railroad that operates on the general system, FRA will exercise limited jurisdiction over the URT operation at the points of connection– the highway-rail grade crossings. This exercise of limited jurisdiction occurs because such a connection presents sufficient intermingling between the URT system and the general

[21] Of course, if a system does not clearly fall within either category, it may be "other short-haul service" and be subject to FRA's jurisdiction. That is not the case with respect to the SWLRT because, as described below, it has the characteristics of a URT operation.

system railroad to pose hazards to either or both rail operations and to the motoring public. As a result, in those situations, FRA expects the URT system to comply with FRA's grade crossing regulations, as well as any other applicable regulations and laws that are necessary to ensure safety at the crossings, as further specified below.

IV. Application of FRA's Jurisdiction Policy to the SWLRT Operation

FRA's review of all of the relevant materials indicates that the SWLRT is intended to be, and will function as, a URT operation with limited connections to the general system. Several factors, which are discussed below, support this determination.

A. Geographic Scope of the SWLRT

One of the characteristics of a URT system is that it serves an urban area. Met Council's correspondence makes it clear that the SWLRT will provide service to a single urban area, not a sprawling metropolitan region. The SWLRT will be located completely within Hennepin County, Minnesota, extending from downtown Minneapolis and serving the communities of St. Louis Park, Hopkins, Minnetonka, and Eden Prairie. The SWLRT is a proposed extension of the existing METRO Green Line, beginning at the Target Field/Interchange station in the central business district of downtown Minneapolis and terminating at Mitchell Station in Eden Prairie. The SWLRT would add approximately 15.8 miles of standard gage revenue service track and 17 new stations to the region's METRO transit system. Stations will be spaced between 0.45 and 1.86 miles apart.

The SWLRT will service an urban area–the Twin Cities of Minneapolis-St. Paul–in which there will be multiple station stops for moving people from point to point within the cities. The SWLRT will serve the Twin Cities in a similar fashion and within the range of other transit systems that FRA considers to be URT systems. Consequently, FRA has determined that the geography of the SWLRT is consistent with the geography of a URT operation.

B. Function of the SWLRT

The second characteristic of a URT system is its function of moving passengers from station to station within an urban area. Met Council's description of the SWLRT establishes that its focus will be moving passengers from station to station within the Twin Cities region, while also connecting walkable urban neighborhoods with multiple activity centers. Based upon this description, FRA concludes that the function of the SWLRT is similar to the functions of other URT systems.

URT operations differ from commuter operations, in part, by the substantial number of trips that are made on the system for purposes other than traveling to and from places of employment. Not unlike other URT operations, the SWLRT will provide passengers with access to centers of employment. However, transporting passengers to and from work will not be the sole function of the SWLRT. The alignment is also designed to serve a large number of activity centers and neighborhoods and to facilitate the

movement of people among those activity centers and neighborhoods. Met Council has explained that those activity centers and neighborhoods include transit-supported neighborhoods with access to recreational facilities and with mixed commercial, residential, and industrial uses,[22] as well as connections to the north end of downtown Minneapolis.[23] Met Council estimates that the non-work-related trips[24] on the SWLRT will constitute approximately 15 percent of the total trips, while it estimates that the work-related trips[25] will constitute the remaining 85 percent of the total trips.[26]

The station environment for the SWLRT will also be oriented towards providing passengers with non-work-related service throughout the day. Met Council intends to develop stations along the alignment with limited public parking. Ten of the proposed seventeen stations will have park-and-ride lots. The other seven proposed stations will be "walk-up" stations, which will be accessed by pedestrians, bicyclists, or passengers transferring from other transit modes (primarily bus service). "Walk-up" stations are more conducive to urban environments because they facilitate the support for walkable neighborhoods, activity centers, and other future transit-oriented development opportunities. Additionally, the constraint on public parking will be consistent with a URT operation that has substantial station-to-station travel, rather than one-directional commuter travel for work-related trips. Moreover, with primarily non-motorized access to the stations, it will be less likely that suburban commuters will use the SWLRT as an intermediate or final leg of a much longer journey to and from work.

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[22] Station stops include access to housing developments, city halls, cultural establishments and amenities, museums, galleries, multiple shopping centers (including retail stores and restaurants), health care providers, farmers' markets, lakes, public parks, and land designated as future mixed office/retail/residential use.

[23] The SWLRT terminates at the Target Field/Interchange station (developed as part of a separate project), which provides access to multiple attractions, such as Target Field (the Minnesota Twins Major League Baseball stadium) and Target Center (a concert arena and professional basketball arena for the National Basketball Association Timberwolves and the Women's National Basketball Association Lynx). Other destinations along the Green Line, of which the SWLRT is an extension, include the University of Minnesota and Union Depot. The SWLRT will also offer a one-seat ride to downtown St. Paul. Passengers who transfer will be able to ride the Blue Line to the Minnesota Vikings National Football League stadium, the Hennepin County Government Center, the Minneapolis City Hall, the Minneapolis-St. Paul International Airport, Veterans Administration Medical Center, and the Mall of America.

[24] These trips will be comprised of non-home-based errands, shopping, and entertainment-related trips.

[25] These trips will originate at the passenger's home and will terminate at the passenger's place of employment or at an institutional campus.

[26] The fact that Met Council projects that the percentage of work-related trips will exceed the percentage of non-work-related trips does not preclude a finding that the SWLRT's function reflects an URT operation. This is one characteristic that FRA considers when analyzing the function of an operation; it is not determinative. Indeed, data taken from a transit on-board survey (2005-2006) of the Sacramento Regional Transit District system, an existing URT operation, revealed that 52 percent of all of its passengers made work-related trips, yet the system is still considered URT by FRA. Moreover, the overall function of the SWLRT, including the station stops and equipment, support a finding of URT.

Finally, the type of equipment that will be used on the SWLRT supports its function as a URT operation. While the type of equipment used on a system is not determinative of a rail system's characterization, it is relevant. Here, Met Council plans to operate electric light rail vehicles[27] to take advantage of the greater acceleration and deceleration rates and the increased ability to negotiate steeper gradients.

The overall characteristics of the SWLRT's function indicate that it has been designed primarily to ease the movement of passengers throughout the Twin Cities for a variety of reasons. In light of the percentage of non-work-related destinations located along the SWLRT, a station environment that encourages travel between stations, and the implementation of LRT technology, FRA concludes that the function of the SWLRT reflects a URT operation.

C. Frequency of Operations for the SWLRT

The final characteristic of a URT system is the frequency of its service. The SWLRT will operate on a frequency of service that is more indicative of URT service than commuter service.

SWLRT service is proposed to operate 22 hours per day, 7 days per week. The SWLRT will provide service every 10 minutes during peak periods[28] on weekdays, every 15-20 minutes in the early morning and evening hours,[29] and every 30-60 minutes in the late evening hours.[30] On weekends and holidays, the service will have 10-minute headways between 9:00 a.m. and 7:00 p.m., with 15-20 minute headways on mornings from 4:30 a.m. to 9:00 a.m. and evenings from 7:00 p.m. to 9:00 p.m., and 30-60 minute headways in the late evening hours between 11:00 p.m. and 2:00 a.m. Based upon this proposed schedule, it is clear that the SWLRT will provide frequent train service, even outside of the morning and evening peak periods.

Additionally, the above intervals are similar to other transit systems in the United States that are treated by FRA as URT systems. For example, the Valley Metro in Phoenix, Arizona, the Blue Line in Charlotte, North Carolina, and Triangle Transit's URT system in Wake County, North Carolina all operate with headways of 10 minutes peak and 20 minutes off peak. Moreover, the Santa Clara Valley Transportation Authority in San Jose, California operates with headways of 15 minutes peak and 30 minutes off peak.

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[27] Electric light rail vehicles would run on two new sets of tracks (eastbound and westbound) separate from freight rail tracks owned by CP, BNSF, and HCRRA. Electric light rail vehicles may include those currently in use on the Blue and Green Lines, such as Bombardier Flexity Swift and Siemens S70 vehicles.

[28] The peak period runs from 5:30 a.m. to 10:00 p.m.

[29] The early morning hours are between 4:00 a.m. and 5:30 a.m. The evening hours are between 9:00 p.m. and 11:00 p.m.

[30] The late evening hours are between 11:00 p.m. and 2:00 a.m.

The frequency of service of the SWLRT is consistent with the frequency of service of other URT systems. Consequently, FRA concludes that the SWLRT meets the duration and frequency-of-service characteristics of a URT operation.

D. The SWLRT's Connections to the General System

All of the factors described above support a conclusion that the SWLRT, if built and operated as proposed, will be a URT system. The proposed system will move its passengers within one urban area–the Minneapolis-St. Paul Twin Cities region of Minnesota. Additionally, the system will focus on moving passengers from station to station within that urban area, and there will be multiple station stops for that purpose. Finally, the SWLRT will provide frequent train service, even outside of the morning and evening peak periods.

Although the SWLRT will be a URT operation, it will have limited connections to the general system; the SWLRT will share five highway-rail grade crossings with a railroad that operates on the general system.[31] FRA does not, however, consider these connections sufficient to warrant a full assertion of its jurisdiction on the entirety of the SWLRT. Rather, FRA's Policy Statement provides that this type of connection simply requires an assertion of FRA's jurisdiction that will be sufficient to ensure safety at the points of connection. To that end, FRA will exercise jurisdiction only over the portion of the SWLRT that will have the connection with the general system. Moreover, the relevant FRA regulations that will apply to the SWLRT will apply only to its operations that occur at those limited connections with the general system. At all other locations on the SWLRT, FRA's regulations will not apply.

Here, the points of connection will be the five shared highway-rail grade crossings at 5th Avenue South, Blake Road North, Wooddale Avenue, Beltline Boulevard, and 21st Street. Consequently, FRA's highway-rail grade crossing regulations (49 C.F.R. Part 234) will apply to the SWLRT, as well as any regulations that would govern movements at the highway-rail grade crossings, including the following: FRA's radio communication regulations (49 C.F.R. Part 220), FRA's train horn regulations (49 C.F.R. Part 222), FRA's accident reporting regulations (49 C.F.R. Part 225), FRA's signal regulations (49 C.F.R. Parts 233, 235, and 236) and FRA's locomotive headlights and auxiliary lights regulations (49 C.F.R. § 229.125). Moreover, anyone performing maintenance, inspections, or tests on the highway-rail grade crossing warning devices must comply with the hours of service laws and regulations (49 U.S.C. chapter 211 and the hours of service recordkeeping and reporting provisions at 49 C.F.R. Part 228),[32] the roadway

[31] These five shared highway-rail grade crossings are the only connections that the SWLRT will have with the general system. As mentioned above, the SWLRT will not share track with a railroad that operates on the general system. In fact, at grade, the horizontal track separation between the SWLRT and the nearest freight track will be at least 20 feet (from center line to center line). Moreover, there will be no shared stations between the SWLRT and the freight operation, and there will be no rail-rail crossings at grade.

[32] FRA expects that SWLRT dispatchers will have direct communications (such as through a radio) with freight rail dispatchers and/or freight train crews. The SWLRT dispatchers would also be expected to comply with 49 U.S.C. chapter 211, 49 C.F.R. Part 228, and 49 C.F.R. Part 220 while at those connections to

worker protection regulations (49 C.F.R. Part 214), and the alcohol and drug regulations (49 C.F.R. Part 219).

However, as mentioned above, FRA will only apply these regulations to the SWLRT at the five shared highway-rail grade-crossings; these regulations will not apply at any other locations on the SWLRT. For example, FRA's accident reporting regulations will only apply for accidents or incidents that occur at the shared highway-rail grade crossings.[33] To the extent that an accident or incident occurs elsewhere on the SWLRT, Met Council would not have to comply with FRA's accident reporting regulations.

Despite FRA's limited assertion of jurisdiction over the SWLRT, Met Council may petition FRA to waive the regulations that will apply to it. Pursuant to FRA's regulations, FRA may waive regulatory requirements when a waiver is in the public interest and consistent with railroad safety. In doing so, FRA often imposes conditions designed to ensure safety. If Met Council believes that there are some requirements applicable to the SWLRT that should be waived, it may petition for a waiver under the procedures set forth in 49 C.F.R. Part 211. Any such petition should specify why Met Council believes that it should not have to comply with the regulation(s) and what alternative measures it will take to ensure safety. See 49 C.F.R. § 211.9. If FRA's Railroad Safety Board (Safety Board) determines that Met Council can provide, through alternative procedures, the same level of safety that the FRA regulations provide, then the Safety Board may grant the waiver.[34]

V. Conclusion

FRA has concluded that, under the Federal railroad safety laws, if the SWLRT is built and operated as proposed, it will be a URT system with limited connections to the general system. As a result, Met Council will be subject to certain FRA regulations, including 49 C.F.R. Parts 214, 219, 220, 222, 225, 228, 233, 234, 235, and 236, and 49 C.F.R. § 229.125, as well as the hours of service laws, at the points of connection between the SWLRT and the general system. Additionally, as mentioned above, Met Council may

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the general system.

[33] For example, when reporting the train miles, the worker hours, and the number of passengers transported on Form FRA F 6180.55, pursuant to the section entitled "Operational Data & Accident Incident Counts for Report Month," the SWLRT should only submit data that corresponds to the highway-rail grade crossings that are shared between freight rail and the SWLRT. FRA understands that it may be difficult to determine the actual train miles, the worker hours, and the number of passengers transported through the shared highway-rail grade crossings. To minimize such difficulties, FRA requests that the SWLRT estimate the portion of the SWLRT's connection with the general system at the subject highway-rail grade crossings as a percentage of the entirety of the SWLRT, and then calculate the requisite operational data based upon this percentage.

[34] FRA's Safety Board's decision to restrict the exercise of FRA's regulatory authority in no way constrains the exercise of FRA's statutory emergency order authority under 49 U.S.C. § 20104. That authority was designed to address imminent hazards not dealt with by existing regulations and orders and/or so dangerous as to require immediate, *ex parte* action on the Government's part.

petition the Safety Board for a waiver of those regulations under the procedures set forth in 49 C.F.R. Part 211. Finally, if the scope, function, geography, or frequency of the SWLRT operation changes in any meaningful manner, FRA expects Met Council to advise FRA, in a timely manner, of those changes so that FRA may determine whether additional action is necessary.

We appreciate your cooperation in this dialogue. Should you have any questions, please do not hesitate to contact Trial Attorney Veronica Chittim of my office at 202-493-0273.

Sincerely,

Melissa L. Porter
Chief Counsel

Minnesota Department of Transportation

Office of Environmental Services
Mail Stop 620
395 John Ireland Boulevard

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Fax: (651) 366-3603
greg.mathis@state.mn.us

October 13, 2014

Sarah Beimers
State Historic Preservation Office
Minnesota Historical Society
345 Kellogg Blvd. W.
St. Paul, MN 55102

RE: Southwest Light Rail Transit Project, Hennepin County, Minnesota; comments received in response to April 2014 consultation on project effects, SHPO #2009-0080

Dear Ms. Beimers,

We are writing to continue our consultation regarding the Southwest Light Rail Transit (LRT) project. First, let me thank you for your participation at the Section 106 consulting parties meeting held on 30 April 2014 and for your comments of 21 May 2014 regarding this meeting and the consultation materials submitted on 18 April 2014. Subsequent to the consulting parties meeting, we received additional comments from the City of Minneapolis (City) and the Minneapolis Park and Recreation Board (MPRB), which are summarized below. Since other Section 106 consulting parties were not copied on these communications, we are submitting them to your office and copying all Section 106 consulting parities so that everyone has the same materials. No response is required.

On 16 May 2014 the City provided comments indicating that it would be premature for the City to provide separate comments under Section 106 prior to its decision as part of the municipal consent process (Attachment A). While not required by NEPA or Section 106, municipal consent is a process established by Minnesota Statue 473.3994, whereby the governing body of each statutory and home rule charter city, county, and town in which a LRT route is proposed to be located is provided an opportunity to review the preliminary design plans and either approve or disapprove the plans for the route to be located in the city, county, or town. A local unit of government that disapproves the plans must also describe specific amendments to the plans that, if adopted, would cause it to withdraw its disapproval. The City approved municipal consent for the project on 29 August 2014, but has not provided any comments under Section 106 since that time.

On 18 May 2014 the MPRB issued comments pertaining to potential effects to several National Register eligible properties in Minneapolis (Attachment B). Specific comments were provided on three properties, all of which are contributing resources to the National Register eligible Grand Rounds Historic District (XX-PRK-001):

- Lake Calhoun (HE-MPC-01811)
    - Concerned about potential impacts from changes in traffic and parking patterns related to the West Lake Station; and
    - Request for continued consultation through final design of new and/or improved access routes to the station to achieve no adverse effect from traffic and parking changes.
- Cedar Lake Parkway (HE-MPC-01833)
    - Concerned about long-term noise and visual effects at the intersection of the project and this resource;

    - Impacts to adjacent park land; and
    - Request for continued consultation on potential effects to this resource.
- Kenilworth Lagoon/Channel (HE-MPC-1822)
    - Concerns:
        - Size and scale of the proposed new bridge structures crossing over the lagoon/channel and their inconsistency with the design intent and historic cultural landscape of the channel;
        - Visual impacts of tunnel portals on each side of the channel
        - Noise and vibrations from LRT vehicles entering/exiting the tunnels; and
        - May not be possible to mitigate impacts of new bridges.
    - Request continued consultation to further consider potential impacts to the lagoon/channel.

The MPRB also requested continued consultation related to the potential impacts of the new bridge structures over the Kenilworth Lagoon/Channel to five National Register eligible properties:

- Cedar Lake (Grand Rounds) (HE-MPC-1820)
- Lake of the Isles (Grand Rounds) (HE-MPC-1824)
- Lake of the Isles Parkway (Grand Rounds) (HE-MPC-1825)
- Park Board Bridge No. 4 (Grand Rounds) (HE-MPC-6901)
- Lake of the Isles Residential Historic District (HE-MPC-9860)

The Federal Transit Administration (FTA) and the Minnesota Department of Transportation Cultural Resources Unit, as designated authority by FTA, will take these comments, as well as those provided by your office, into account as Project planning moves forward. We look forward to continuing to consult with your office to consider potential effects to these and other listed and eligible historic properties as Project planning moves forward.

Sincerely,

Greg Mathis
MnDOT Cultural Resources Unit

Enclosures: Two (2)

cc (via email): Maya Sarna, Federal Transit Administration
Bill Wheeler, Federal Transit Administration
Nani Jacobson, Metropolitan Council
Caroline Miller, Metropolitan Council
Katie Walker, Hennepin County
Regina Rojas, City of Eden Prairie
Nancy Anderson, City of Hopkins
Brian Schaffer, City of Minneapolis
John Byers, City of Minneapolis
Elise Durbin, City of Minnetonka
Meg McMonigal, City of St. Louis Park
Kathy Low, Kenwood Isles Area Association
Jennifer Ringold, Minneapolis Park and Recreation Board
Bill Walker, Three Rivers Park District

ATTACHMENT A

From:	Byers, Jack P.
To:	Gimmestad, Dennis (DOT)
Cc:	sarah.beimers@mnhs.org; Jacobson, Nani (Nani.Jacobson@metrotransit.org); Hager, Jenifer A; Schaffer, Brian C.
Subject:	Southwest LRT 106 Consultation - Your request for comments from Minneapolis by May 18th
Date:	Friday, May 16, 2014 11:02:32 AM

Dennis,

Thank you for convening all of the consulting parties on the Southwest Transitway Section 106 process on April 30th. We appreciate your presentation of the updated Potential Effects table and we appreciate the research and chronology that the 106 Group presented during that meeting. Both were illuminating and very helpful. Thank you for your hard work on this project.

As you are aware, the City of Minneapolis and the other municipalities along the proposed corridor are currently engaged the Municipal Consent process; one that includes a specific set of proposals from SPO. City of Minneapolis staff are reviewing the SPO package and preparing our comments for subsequent review and consideration by our City Council. City staff are certainly keeping matters related to historic resources in mind as we conduct our Municipal Consent review. However, given that the Municipal Consent process is formally underway, it would be premature for us to comment specifically on 106 matters separately and before our City Council's review and decision on Municipal Consent is completed.

Thank you for understanding. Please feel free to contact me if you have any questions or require further clarification.

Regards,
Jack Byers

Jack Byers, AICP
Long Range Planning Manager

City of Minneapolis – Community Planning and Economic Development
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DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT, CORPS OF ENGINEERS
180 FIFTH STREET EAST, SUITE 700
ST. PAUL MINNESOTA 55101-1678

OCT 16 2014

REPLY TO
ATTENTION

Operations
Regulatory (2009-01283-MMJ)

Ms. Marisol Simon
U.S. Department of Transportation
Federal Transit Administration, Region V
200 West Adams Street, Suite 320
Chicago, Illinois 60606-5253

Dear Ms. Simon:

We have reviewed the Southwest Light Rail Transit (SWLRT) Concurrence Points package dated May 5, 2014, as well as additional materials received at the SWLRT Wetland Regulatory Coordination meetings in June and September of this year. After reviewing this additional information we can now concur with Point 3 (Identification of the Selected Alternative) for the SWLRT Project, as outlined in the National Environmental Policy Act (NEPA) / Section 404 Clean Water Act (404) merger process.

After reviewing the SWLRT Draft Environmental Impact Statement (DEIS), we concurred with Point 1 (Project Purpose and Need) and Point 2 (Array of Alternatives and Alternatives Carried Forward) of the merger process for the SWLRT project in a letter dated December 20, 2012. As stated in our 2012 letter, to comply with Clean Water Act 404(b)(1) Guidelines, the alternatives analysis for the SWLRT project must describe how you considered ways to avoid and minimize impacts to waters of the U.S. (WOUS) so that the least environmentally damaging practicable alternative (LEDPA) can be identified. Per the Guidelines, a practicable alternative is defined as available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose.

Numerous alternatives were considered for the SWLRT project. The SWLRT DEIS included alignments LRT 3A (freight rail re-location), and LRT 3A-1 (freight rail co-location), as potential locally preferred alternatives (LPA) for this project. In our 2012 letter we stated that as proposed, alignment LRT 3A would not comply with the 404(b)(1) Guidelines because it would have resulted in greater impacts to WOUS when compared to LRT 3A-1. At that time, we suggested that alignment LRT 3A-1 (co-location) would be the LEDPA for this project.

In addition, in a letter dated July 18, 2013, after learning that the SWLRT project team was working on a Supplemental DEIS (SDEIS), we indicated that we would revisit concurrence Point 2 of the merger process to confirm that the updated SDEIS alternatives analysis would still satisfy CWA Section 404 regulatory requirements. After reviewing your Concurrence Points Package, we have determined that we still concur with Point 2 of the merger process for the SWLRT project, as referenced above.

The SWLRT SDEIS is now proceeding with the LRT 3A-1 (co-location) alignment as the LPA. After reviewing more refined wetland impact calculations, we have confirmed that alignment LRT 3A-1 will still result in fewer impacts to WOUS when compared to LRT 3A. Therefore, we have again made a preliminary determination that alignment LRT 3A-1 is the LEDPA for this project. As is typical of a NEPA/404 merger process, if substantial new information regarding alignment LRT 3A-1 is brought forward later in the project development process, we may revisit this decision and our concurrence that the selected alternative is the LEDPA.

The SWLRT project team recently provided us with an updated preliminary wetland impact figure for this project indicating that impacts to WOUS associated with the LPA have risen from approximately 8.7 acres, identified as of April 2014, to approximately 18.5 acres, as a result of further project development. Due to this significant increase in expected impacts, we anticipate greater emphasis being placed on maximizing avoidance and minimization measures as the LPA is further refined, and we work towards Concurrence Point 4 of the merger process (Design Phase Impact Minimization).

We look forward to reviewing the SDEIS for this project. For further information, please contact Melissa Jenny, the Corps project manager for Hennepin County, at 651-290-5363 or Melissa.m.jenny@usace.army.mil.

Sincerely,

Tamara E. Cameron
Chief, Regulatory Branch

Copy furnished:
Maya Sarna, FTA, HQ
Bill Wheeler, FTA, Region V
Virginia Laszewski, EPA
Nani Jacobson, Metropolitan Council
Ben Hodapp, Anderson Engineering

Minnesota
Historical Society

Using the Power of History to Transform Lives
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STATE HISTORIC PRESERVATION OFFICE

November 7, 2014

Greg Mathis
MnDOT Cultural Resources Unit
395 John Ireland Boulevard, Mail Stop 620
St. Paul, MN 55155-1899

RE: Southwest Light Rail Transit Project
Multiple Communities, Hennepin County
SHPO Number: 2009-0080

Dear Mr. Mathis:

Thank you for continuing consultation on the above project. Information received in our office on 7 October 2014 has been reviewed pursuant to the responsibilities given the State Historic Preservation Officer by the National Historic Preservation Act of 1966 and implementing federal regulations at 36 CFR 800, and to the responsibilities given the Minnesota Historical Society by the Minnesota Historic Sites Act and the Minnesota Field Archaeology Act.

We have completed our review of additional transit project information including your correspondence dated October 3rd and the archaeological survey report entitled *Phase I Archaeological Investigation Southwest Light Rail Transit, Hennepin County, Minnesota, SDEIS Areas: Eden Prairie Segment, Archaeological Potential Area C* (CH2M Hill, September 2014).

We agree with the results of the archaeological survey which indicate that there were no archaeological resources identified and that further archaeological investigation is not warranted for Area C. We concur with your determination that there are no additional historic properties identified in this area.

It is our understanding that Phase 1 archaeological surveys will be completed for Areas A & B and the results will be submitted to our office for review and comment.

We look forward to continuing consultation on this important project. If you have any questions or concerns regarding this comment letter, please feel free to contact me at 651-259-3456 or sarah.beimers@mnhs.org.

Sincerely,

Sarah J. Beimers

Sarah Beimers, Manager
Government Programs & Compliance

PRESERVATION
DESIGN WORKS, LLC

November 12, 2014

Greg Mathis
Minnesota Department of Transportation
Office of Environmental Services-Cultural Resources Unit
Mailstop 620
395 John Ireland Boulevard
St. Paul, Minnesota 55155
greg.mathis@state.mn.us

CC: Kathy Low, Kenwood Isles Area Association, KIAA, lowmn@comcast.net

RE: Southwest Light Rail Transit Project 2014
Kenwood Isles Area Association Comments on October 14, 2014 Comments Received in Response to April Consultation on Project Effects and October 17, 2014 Adjustments to the Area of Potential Effect

Dear Mr. Mathis,

Thank you for the opportunity to review the Section 106 materials provided to Sarah Beimers of the Minnesota State Historic Preservation Office. The October 14, 2014 Comments Received in Response to April 2014 Consultation on Project Effects, SHPO #2009-0080 and the October 17, 2014 Adjustments to the Area of Potential Effect have the potential to have a significant impact on the identified historic resources located within the Kenwood neighborhood.

- KIAA agrees with the May 18, 2014 comments issued by the Minneapolis Park and Recreation Board (MPRB) regarding the size and scale of the proposed new bridge structures crossing the Kenilworth Channel and Lagoon [HE-MPC-1822] and their inconsistency with the historic cultural landscape of the channel, the noise and vibrations caused by the light rail vehicles traveling the bridge, and the fact that it may not be possible to mitigate the impacts of the new bridge. KIAA welcomes the opportunity to continue consultation on the bridge and its impact on the Kenilworth Channel and Lagoon.
- The re-introduced light rail station at 21st Street (Station) has the potential to impact the Kenwood Parkway Residential Historic District (District). The station infrastructure and related development has the potential to change traffic and parking patterns in the neighborhood, introduce long-term visual and audible intrusion, and adversely impact the District's historic setting—potential effects that extend beyond the currently proposed APE. KIAA welcomes the opportunity to continue consultation on this station.

- The re-introduced light rail station at 21st Street (Station) has the potential to adversely impact Kenwood Parkway/Grand Rounds [HE-MPC-01796]. KIAA welcomes the opportunity to continue consultation on this station.
- KIAA agrees with MNDOT's assertion that the Kenilworth Corridor is located in a park-like setting and believes that the Kenilworth Channel is a significant feature of this setting. The proposed at-grade bridge over the Kenilworth Channel [HE-MPC-1822] has significant potential to adversely impact the historic landscape of the channel. KIAA welcomes the opportunity to continue consultation on this bridge.
- KIAA agrees that lighting and security improvements throughout the corridor in the proximity of station areas will be necessary and welcomes the opportunity to continue consultation on these improvements.
- KIAA welcomes the opportunity to continue consultation on the "high quality aesthetic design, including community engagement, of all fence and railings throughout the corridor."

Again, thank you for the opportunity to review these materials and to participate in future consultation for the Section 106 review of the Southwest Light Rail Transit Project.

Sincerely,
PRESERVATION DESIGN WORKS

Tamara Halvorsen Ludt
Research Associate

PRESERVATION
DESIGN WORKS, LLC

10 December 2014

Greg Mathis
Minnesota Department of Transportation
Office of Environmental Services
Cultural Resources Unit
Mailstop 620
395 John Ireland Boulevard
St. Paul, Minnesota 55155
greg.mathis@state.mn.us

RE: Kenwood Isles Area Association (KIAA) Comments on November 12, 2014 Consultation on Potential Effects of Southwest Light Rail Transit Project, SHPO #2009-0080

Dear Mr. Mathis,

Thank you for the opportunity to review the materials provided to Sarah Beimers of the Minnesota State Historic Preservation Office and to participate in the 24 November 2014 consultant meeting for the Southwest Light Rail Transit Project. Your warm welcome at the meeting was greatly appreciated. The Kenwood Isles Area Association (KIAA) has the following comments on the materials:

Table of Potential Effects on Historic Properties (12 November 2014):

1. KIAA contends that the language used in the Effects Analysis and Preliminary Determination of Effect is problematic. For example, it is inconsistent to write that access routes to the stations from Kenwood Parkway may "result in potential minor effects from construction of access routes... and from visual effects of access route elements" and then reach a determination of "no adverse effect." The 106 process allows for two possible determinations of effect: no adverse effect and adverse effect (36 CFR 800.5). There are not grades of adverse effects. In accordance with the regulations, KIAA asserts that "minor effects" are adverse effects and, as such, does not agree to a determination of "no adverse effect" on Kenwood's historic resources.
2. KIAA disagrees with the preliminary determination, based on preliminary plans, of no adverse effect on the Kenwood Parkway Residential Historic District (*HE-MPC-18059*), Kenwood Parkway (*HE-MPC-01796*), Kenwood Park (*HE-MPC-01797*), the Frank & Julia Shaw House (*HE-MPC-6603)*, the Frieda & Henry J. Neils House (*HE-MPC-6068*), and the Mahalia & Zacharia Saveland House (*HE-MPC-6766*). KIAA agrees that changes in traffic and parking patterns created by the 21st Street Station and Penn Station need further assessment. Further, KIAA agrees that the impact of light and noise from the trains on these historic resources also requires further study. Because these potential adverse effects require further assessment, KIAA asserts that it is premature to reach a preliminary

determination of "no adverse effect." If MnDOT, for the FTA, is requesting comment without a memorandum of agreement, additional documentation is required pursuant to 36 CFR 800.11. KIAA looks forward to continued consultation on all issues related to these historic resources, and requests to be a signatory to any memorandum of agreement or programmatic agreement that may be developed for this undertaking in the future.

3. KIAA believes that it is premature to reach a determination of "no adverse effect with continued consultation" because "continued consultation" is not clearly defined. At this time, plans for continued consultation have not been specified, there is not a proposed timetable, and it is not stated whether effects are going to be determined prior to, during, or after construction. While KIAA appreciates that 106 consultation is an ongoing process, it has concerns about the suggestion made during the consultant meeting that "continued consultation" could include traffic monitoring after construction as it is impossible to avoid adverse effects once stations are operational. KIAA asserts that either a memorandum of agreement pursuant to 36 CFR 800.11 or a program agreement pursuant to 36 CFR 800.14 is desirable if effects cannot be determined prior to approval of the undertaking.

4. KIAA is concerned about the impact of construction on Kenwood Parkway, the Kenwood Parkway Residential Historic District, Kenwood Park, the Frank and Julia Shaw House, the Frieda & Henry J. Neils House, and the Mahalia & Zacharia Saveland House. Do the vibration studies account for increased truck and construction equipment traffic and the resulting vibrations and potential impacts on historic resources? If not, KIAA requests preparation of a construction protection plan that incorporates guidance offered by the National Park Service in Preservation Tech Note #3: Protecting a Historic Structure during Adjacent Construction.

5. Assuming that the vibration studies account for the impact of construction and construction-related traffic, KIAA agrees with the finding of "no adverse effect" on the Kenwood Water Tower (*HE-MPC-06475*). If the vibration studies do not account for construction and related equipment, KIAA does not agree with a finding of "no adverse effect" on the Kenwood Water Tower until development of a construction protection plan that incorporates guidance offered by the National Park Service in Preservation Tech Note #3: Protecting a Historic Structure during Adjacent Construction, as well as a memorandum of agreement or a programmatic agreement that specifies how these potential impacts will be monitored following approval of the undertaking.

6. KIAA agrees with the determination of "adverse effect" on the Kenilworth Lagoon. KIAA would like to reiterate the Minneapolis Park and Recreation Board and SHPO concerns, expressed during the November 24, 2014 consultants meeting, regarding the setting and visitor experience of the lagoon. "Setting" and "feeling" are criteria of integrity that are used to determine National Register of Historic Places eligibility and KIAA is concerned that an increase in sound will adversely alter the setting and feeling of the Kenilworth Lagoon and will adversely impact how people use this historic resource. KIAA looks forward to continuing consultation on all issues related to the Kenilworth Lagoon.

Again, thank you for the opportunity to review these materials and to participate in future consultation for the Section 106 review of the Southwest Light Rail Transit Project.

Sincerely,
PRESERVATION DESIGN WORKS

Tamara Halvorsen Ludt
Architectural Historian
& Research Associate

cc: Kenwood Isles Area Association
Cedar Isles Dean Neighborhood Association
Minneapolis Park and Recreation Board
Sarah Beimers, Minnesota State Historic Preservation Office

Minneapolis
Park & Recreation Board

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December 12, 2014

Greg Mathis
MnDOT Cultural Resources Unit
Office of Environmental Stewardship
Mail Stop 620
395 John Ireland Boulevard
Saint Paul, MN 55155

Re: Minneapolis Park and Recreation Board Comments on the Southwest LRT Section 106 Review

Dear Greg:

The Minneapolis Park and Recreation Board (MPRB) welcomes this opportunity to comment further on the Section 106 Review for the Southwest Transitway (SWLRT) project. We remain concerned about the archaeological and architecture/historic resources on MPRB land that will be adversely affected by the SWLRT project route and construction plans.

With respect to the adverse effects to the Kenilworth channel of all bridge changes, MPRB staff have the following comments:

- Burnham Road Bridge (HE-MPC-1832) - Although the bridge is a non-contributing feature of the Grand Rounds Historic District, we feel the views from and to it of the SWLRT Project are an important component of the historic nature of the channel, and need to be considered an adverse effect overall.
- Lake Calhoun (HE-MPC-01811) – We continue to be concerned about the traffic and safety impacts of the West Lake Station on this important element of the Grand Rounds, as discussed in our May 16, 2014 comment letter.
- Cedar Lake Parkway (HE-MPC-01833) – We reiterate our comments in our May 16, 2014, comment letter of concern about the 'quiet zone' nature of this area and the need to be sure the construction design and documents reflect this unique designation and need.

President
Liz Wielinski
Vice President
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Anita Tabb
M. Annie Young
Superintendent
Jayne Miller
Secretary to the Board
Pamela French

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- Kenilworth Lagoon (HE-MPC-1822) – The MPRB agrees with the determination of adverse effect of the SWLRT project on the Kenilworth Channel and Lagoon. Noise, dust and views throughout the area will be significantly impacted. We are concerned that no amount of mitigation will offset these adverse effects on the quiet, naturalistic and picturesque nature of the park experience and use.
- Cedar Lake (HE-1820) – We disagree with the preliminary determination of no adverse effect to Cedar Lake at this time. There has not been sufficient study of the sound and visual effects of the proposed project at the Kenilworth Channel nor at the westerly end of the Channel at Cedar Lake to make this conclusion at this time.
- Park Board Bridge #4 (HE-MPC-6901), Lake of the Isles Parkway (HE-MPC-1825), and Lake of the Isles (HE-MPC-1824) – For all three Grand Rounds elements, the preliminary determination remains 'to be determined.' All three seem to anticipate the design of the new bridges may avoid, minimize or mitigate any adverse effects. So far, we have seen no evidence that significant mitigation can be achieved.

We recognize that the project office provided potential bridge designs at the consultation meeting on November 24, 2014. Overall, it seems premature for the MPRB to provide comment on designs for the Kenilworth Channel bridges. We would appreciate knowing when the official comment period for these designs is going to begin and end. In the interim, as described above, it appears impossible to mitigate adverse effects based on the features of these designs.

Thank you for this opportunity to comment on the Section 106 review for the LRT. If you have any questions, please do not hesitate to contact Jennifer Ringold, Director of Strategic Planning, at 612-230-6464 or jringold@minneapolisparks.org.

Sincerely,

Jennifer Ringold
Director of Strategic Planning

Minnesota
Historical Society

STATE HISTORIC PRESERVATION OFFICE

Using the Power of History to Transform Lives
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December 12, 2014

Greg Mathis
MnDOT Cultural Resources Unit
395 John Ireland Boulevard, Mail Stop 620
St. Paul, MN 55155-1899

RE: Southwest Light Rail Transit Project
Multiple Communities, Hennepin County
SHPO Number: 2009-0080

Dear Mr. Mathis,

Thank you for continuing consultation on the above project which is being reviewed pursuant to the responsibilities given the State Historic Preservation Officer by the National Historic Preservation Act of 1966 and implementing federal regulations at 36 CFR 800, and to the responsibilities given the Minnesota Historical Society by the Minnesota Historic Sites Act and the Minnesota Field Archaeology Act.

We have completed our review of the two (2) project consultation packages which were submitted to our office on 17 October 2014 and 12 November 2014. Our comments are provided below.

In addition to reviewing these materials, we participated in the Section 106 Consulting Parties meeting held at the Southwest Project Office on November 24, 2014. Thank you for convening all of the consulting parties and agency representatives for this meeting.

Area of Potential Effects Revisions
As indicated and agreed to in the project's 2010 research design for cultural resources, you have recently completed a reevaluation of the area of potential effect (APE) determinations for this project. The APE reassessment at this time is a result of completion of the 30% Preliminary Plans and several adjustments to the project scope as outlined in the memorandum of understanding (MOU) between the Metropolitan Council and the City of Minneapolis. Although there are previously identified historic properties within the revised APEs, it is our understanding that your agency will continue with identification and evaluation efforts within previously un-surveyed areas and submit these for our review upon completion. At this time, we concur with your determinations for and documentation of the revised APEs as submitted.

You have also provided documentation regarding the establishment of additional parameters for continued analysis of potential adverse effects and adjustments to the APE as project design development continues. We agree with your determination that these additional parameters will provide consistency in the applicability of APE determinations for common project elements.

Preliminary Project Effects Assessments
It is our understanding that the assessments of adverse effect and preliminary determinations of effect provided in your November 12rh correspondence have been determined based upon project engineering at the 30% design stage and that adverse effect determinations will be made by the Federal Transit Administration.

We acknowledge that we have previously provided concurrence with what your agency defined, and therefore we perceived, as "assessments of potential effect" which included commonly used Section 106 terminology of "no adverse effect" and "adverse effect". These are now presented in Section 1 of the table entitled *Southwest Light Rail Transit Project: Section 106 Review – Preliminary Determination of Effects on Historic Properties 11/12/*2011 (Table) as effect determinations and defined as such in your correspondence. To date, the FTA has not provided final effect determinations for our review and concurrence, therefore these determinations should not be presented as final.

For the historic properties listed under Section 2 and Section 3 of the Table, we agree that the assessment of potential effects and proposed action steps are appropriate at this time. To reiterate, it is our opinion that the preliminary effect determinations provided in this Table serve only to provide a basis for continuing project design development in an effort to avoid or minimize potential adverse effects. We will defer concurrence with any "no adverse effect" or "adverse effect" determinations, preliminary or otherwise, until such time as the FTA provides these determinations to our office for review.

We took the time to review the original correspondence dated May 4, 2010 which, pursuant to 36 CFR 800.2(c)(4), designated your agency to act on behalf of the FTA to complete the following, in consultation with our office, identified consulting parties, and the public:

- Initiate the Section 106 process;
- Identify the area potential effect (APE);
- Conduct appropriate inventories to identify historic properties within the APE;
- Make determinations of eligibility to the National Register of Historic Places;
- Make assessments of potential effect.

The FTA indicated in this letter that they would retain authority to "make determinations of adverse effect" and negotiate the terms and conditions of a Section 106 agreement, if necessary. We respectfully request clarification from the FTA and your agency addressing our concerns and expectations for consultation regarding the results of assessment of adverse effect pursuant to 36 CFR 800.5(d).

Regarding our review of the *Kenilworth Lagoon/Channel Context, History, and Physical Description* report, we agree that this report provides critical information regarding the historic context, physical description, and identification of character-defining features of the Kenilworth Lagoon/Channel property which is a sub-segment of the Chain of Lakes Segment of the National Register-eligible Grand Rounds Historic District. While this report provides identification of the cultural landscape's character-defining features, we recommend that the final version of this report include information regarding identification and evaluation, following National Register criteria, for features in terms of those which may be considered "contributing" or "non-contributing" elements to the eligible historic district. This information will be essential as we continue to consult regarding the assessment of adverse effects and resolution of potential adverse effects.

We look forward to continuing consultation on this project. If you have any questions or concerns regarding this comment letter, please feel free to contact me at 651-259-3456 or sarah.beimers@mnhs.org.

Sincerely,

Sarah J. Beimers

Sarah Beimers, Manager
Government Programs & Compliance

U.S. Department
of Transportation
**Federal Transit
Administration**

REGION V
Illinois, Indiana,
Michigan, Minnesota,
Ohio, Wisconsin

200 West Adams Street
Suite 320
Chicago, IL 60606
312-353-2789
312-886-0351 (fax)

December 16, 2014

Ms. Tamara Cameron, Chief Regulatory Branch
Department of the Army
St. Paul District, Corps of Engineers
180 5th St. E., Suite 700
St. Paul, MN 55101

RE: Section 106 compliance for the Southwest Light Rail Transit Project, Hennepin County, Minnesota, SHPO #2009-0080

Dear Ms. Cameron,

The Metropolitan Council is proposing to construct the Southwest Light Rail Transit Project (Project), an approximately 16-mile light rail transit line linking the cities of Minneapolis, St. Louis Park, Hopkins, Minnetonka, and Eden Prairie, all located in Hennepin County, Minnesota. The Project anticipates receiving Federal funding assistance from the Federal Transit Administration (FTA) and, therefore, must meet the requirements of Section 106 of the National Historic Preservation Act (Section 106), 16 U.S.C. Section 470(f), as amended. In accordance with 36 CFR Part 800, the head of the FTA, as the Agency Official, has legal responsibility for complying with the Section 106 process. As such, it is the responsibility of the Agency Official to identify and evaluate undertakings on historic properties, to resolve adverse effects, and coordinate with the Advisory Council on Historic Preservation (ACHP), if appropriate.

The FTA has initiated consultation with the Minnesota State Historic Preservation Office (MnSHPO) and consulting parties to consider effects to historic properties that are listed in and eligible for inclusion in the National Register for Historic Places (NRHP). In accordance with 36 CFR Part 800.2, the Agency Official may use the services of grantees, applicants, consultants, or designees to prepare the necessary information and analysis, but remains responsible for Section 106 compliance. FTA has delegated Minnesota Department of Transportation Cultural Resources Unit (MnDOT CRU) to act on its behalf for the Section 106 review for the Project. Under this delegation, MnDOT CRU is authorized to initiate the Section 106 process, identify the area of potential effect (APE), make determinations of eligibility for the National Register of Historic Places (NRHP), make assessments of potential effect, and conduct consultation with MnSHPO, interested parties and the public. MnDOT CRU will also work with FTA to designate consulting parties, make determinations of adverse effect, and negotiate the terms and conditions of a Section 106 agreement. FTA retains full authority in all these areas to make all final decisions and remains legally responsible for all findings and determinations charged to the Agency Official under 36 CFR Part 800. MnDOT CRU will also assist FTA in Section 106 tribal consultation, consistent with the requirements of 36 CFR Part 800. FTA will handle formal coordination with the ACHP.

Only staff employed as part of MnDOT's CRU that meet the qualifications of 36 CFR Part 61 can act on behalf of FTA. These responsibilities cannot be delegated to other MnDOT personnel or consultants acting on MnDOT's behalf.

In accordance with 36 CFR Part 800.2, which encourages Federal agencies to efficiently fulfill their obligations under Section 106, if more than one Federal agency is involved in an undertaking, some or all the agencies may designate a lead Federal agency, which shall identify the appropriate official to serve as the Agency Official who shall act on their behalf, fulfilling their collective responsibilities under section 106. Those Federal agencies that do not designate a lead Federal agency remain individually responsible for their compliance with this part.

In accordance with 36 CFR Part 800.2(a)(2), the United States Army Corps of Engineers (USACE) may choose to designate FTA as the lead Federal agency for the Project and to act on its behalf for meeting the requirements of Section 106. Under this designation, the USACE will remain a signatory party to the Section 106 Agreement for the Project. Please respond to FTA, in writing by January 15, 2015, on whether USACE will designate FTA as the lead Federal agency for purposes of meeting USACE compliance under Section 106 or if USACE will remain solely responsible for meeting its compliance on Section 106. Your response may be sent electronically to William Wheeler, Community Planner, at William.Wheeler@dot.gov; please include the title of the official responding. We further request that you copy Sarah Beimers, MnSHPO Manager of Government Programs and Compliance, at sarah.beimers@mnhs.org, and Greg Mathis with MnDOT CRU at greg.mathis@state.mn.us on your response. Please contact Mr. Wheeler at (312) 353-2639, or Mr. Mathis at (651) 366-4292 if you have any questions or would like to discuss the project in more detail.

Thank you for your cooperation and interest in this project.

Sincerely,

Marisol R. Simón
Regional Administrator

cc: Melissa Jenny, St. Paul District, Corps of Engineers
Maya Sarna, Federal Transit Administration
Bill Wheeler, Federal Transit Administration
Greg Mathis, MnDOT Cultural Resources Unit
Nani Jacobson, Metropolitan Council

Minnesota Department of Transportation

Office of Environmental Services
Mail Stop 620
395 John Ireland Boulevard

Office Tel: (651) 366-4292
Fax: (651) 366-3603
greg.mathis@state.mn.us

December 16, 2014

Ms. Debra Brisk
Assistant County Administrator – Public Works
Hennepin County
A-2003 Government Center
300 S. 6th St.
Minneapolis, MN 55487-0233

RE: Consulting party status; Section 106 review for the Southwest Light Rail Transit Project, SHPO No. 2009-0080

Dear Ms. Brisk,

On behalf of the Federal Transit Administration (FTA), I am extending an invitation to Hennepin County to participate in the Section 106 review process for the Southwest Light Rail Transit Project (Project). As you know, the Project is an approximately 16-mile long transit facility linking the cities of Minneapolis, St. Louis Park, Hopkins, Minnetonka, and Eden Prairie, sponsored by the Metropolitan Council, with funding from the FTA. The Minnesota Department of Transportation Cultural Resources Unit (MnDOT CRU) is acting on behalf of FTA in carrying out many aspects of the Section 106 review.

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties that are listed in or eligible for the National Register of Historic Places. When there are potential adverse effects, the agency must consider ways to avoid, minimize, or mitigate those effects. The result is often a Section 106 agreement, which stipulates measures to be taken to address effects to historic properties.

Local governments are entitled to participate in the Section 106 process as consulting parties, along with the State Historic Preservation Office, Indian tribes, and other interested organizations and individuals. Consulting parties are able to share their views, receive and review pertinent information, offer ideas, and consider possible solutions together with the Federal agency and other parties. Consulting parties play an active and important role in determining how potential effects on historic properties will be avoided, minimized, or mitigated during the planning and implementation of a proposed project. For more information, see: http://www.achp.gov/docs/CitizenGuide.pdf.

We would welcome the involvement of Hennepin County in the Section 106 consultation for the Project. The County was involved in the consultation while the Hennepin County Regional Railroad Authority was the Project sponsor; however, this official involvement ended when the Metropolitan Council assumed Project sponsorship. If you would like to participate, please let us know of your interest in writing. If you have any questions, please contact me at (651) 366-4292.

Sincerely,

Greg Mathis
Minnesota Department of Transportation
Cultural Resources Unit

cc: William Wheeler, Federal Transit Administration
Sarah Beimers, Minnesota State Historic Preservation Office
Nani Jacobson, Metropolitan Council
David Jaeger, Hennepin County

Hennepin County Public Works
Strategic Planning & Resources Department
701 Fourth Avenue South, Suite 700
Minneapolis, Minnesota 55415-1842
www.hennepin.us

Mr. Greg Mathis
MnDOT Cultural Resources Unit
Office of Environmental Services
Minnesota Department of Transportation
395 John Ireland Boulevard, Mail Stop 620
St. Paul, MN 55155

RE: Consulting Party status: Section 106 review for the Southwest Light Rail Transit Project, SHPO No. 2009-0080

Dear Mr. Mathis,

We would like to accept and thank you for the invitation extended by you to Debra Brisk on December 16, 2014 to participate as consulting party in the Section 106 review process for the Southwest Light Rail Transit (LRT) project. We acknowledge that the MnDOT Cultural Resources Unit is continuing to act on behalf of the Federal Transit Administration in carrying forward the efforts of the Section 106 review for this project, and that this invitation acceptance letter formalizes Hennepin County's instatement of consulting party status in lieu of what had been the Hennepin County Regional Rail Authority.

The proposed project will utilize property both owned by and adjacent to facilities/land owned by the Hennepin County's regional railroad authority. In addition, Hennepin County through the Southwest LRT community works program will be actively pursuing development opportunities within the ½ mile radius of the proposed Southwest LRT line and would benefit from participation in the 106 review process. The following Hennepin County staff should be used as the contacts for the 106 review process; myself, Nelrae Succio and Katie Walker.

If you have questions, please contact me at 612-348-5714 or at david.jaeger@hennepin.us. Thank you again for your invitation, we look forward to continuing working with you on this significant project.

Sincerely,

David Jaeger
Environmental Coordinator

CC: William Wheeler, Federal Transit Administration
Sarah Beimers, Minnesota State Historic Preservation Office
Nani Jacobson, Metropolitan Council
Debra Brisk, Hennepin County

Minneapolis
Park & Recreation Board

Administrative Offices
2117 West River Road
Minneapolis, MN 55411-2227

Operations Center
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Minneapolis, MN 55409-1000

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Jennifer B. Ringold

Accredited CAPRA 2010-2015

January 2, 2015

Marisol Simon
Regional Administrator, Region 5
Federal Transit Administration
200 West Adams Street, Suite 2410
Chicago, IL 6060

RE: Request for Meeting to Discuss Legal Jeopardy to the Federal Transit Administration (FTA) New Starts Program Created by the Implementation of the Program for the Southwest Light Rail Project ("SWLRT Project") in Minneapolis, Minnesota by the FTA and the Metropolitan Council

Dear Administrator Simon:

This letter is written on behalf of the Minneapolis Park and Recreation Board ("MPRB") an elected body responsible for protecting and preserving the Minneapolis park system. We, the MPRB, respectfully request a meeting with the FTA to begin the consultation and coordination required under federal law for the SWLRT Project under federal regulations. (See 23 CFR § 774.3.) The current implementation of the FTA's New Starts Program by the Metropolitan Council is in violation of federal laws including the National Environmental Policy Act (NEPA), Section 4(f) of the Federal Transportation Act (Section 4(f)), Section 106 of the National Historic Preservation Act (NHPA), as well as Minnesota statutory and administrative laws regulating the environment and the light rail system.

The Metropolitan Council's failure to follow federal laws under the guise of the FTA's New Starts projects places the SWLRT Project at a great risk for further delay. We believe the FTA's intervention is necessary to avoid delaying this project and obviate the need for proceedings in other venues.

Currently, the SWLRT Project is scheduled for conclusion of preliminary engineering (PE) and completion of the environmental review documents by the end of March 2015. Yet, despite numerous demands by the MPRB and other community stakeholders, the Metropolitan Council has refused to engage in the public notice and comment procedures required under federal and Minnesota laws.[1] Unless the FTA intervenes, the Metropolitan Council will complete PE, allowing the SWLRT Project to be

[1] For a more detailed factual and procedural history of the MPRB's actions in this respect, see attached Exhibit A.

de facto approved by the FTA[2] before the required environmental and Section 4(f) planning and consultation procedures have taken place.

If the FTA does not intervene now and engage in the required consultation and coordination or require the Metropolitan Council to engage in the required consultation and coordination, the SWLRT Project will continue to run afoul of Section 4(f)'s clear substantive and procedural requirements. The SWLRT Project has failed to engage in any meaningful evaluation of feasible and prudent avoidance alternatives, or make plans to ensure that the least overall harm alternative is adopted with respect to federally protected parkland. Unless the FTA acts now, a park and historic resource that receives over 5 million visits annually—serving local, regional, state-wide and national visitors—will likely be irreparably harmed. Moreover, the legal validity of FTA's New Starts Program generally will be jeopardized by its flawed implementation here in Minnesota.

The MPRB has a legitimate legal right to address any inadequacies in PE before the Section 4(f) evaluation and environmental review processes are subject to comment and completed. The current implementation of the New Starts program for the SWLRT Project is scheduled to result in the completion of PE and Section 4(f) review before the required consultation and coordination by the FTA can occur. For well over one year, the Metropolitan Council has ignored the MPRB's requests for additional review and consultation necessary to evaluate design alternatives to avoid impacts or at least minimize overall harm to the Section 4(f) resources affected by the SWLRT. As a result of this failure to consult and coordinate, the MPRB has been forced to fund engineering studies with up to $500,000 to develop the design alternatives required by Section 4(f).[3] Not only that, but the Met Council has also proposed an expedited implementation schedule designed to deprive the MPRB of a fair opportunity to develop the design alternatives which Section 4(f) requires. Therefore, the FTA must intervene now, to require the Metropolitan Council to extend the PE Phase and comply with Section 4(f) and environmental review mandates, to allow the consultations, coordination and additional PE required to identify avoidance and least harm design alternatives.

Accordingly, pursuant to 23 C.F.R §§ 774.3(a), (c), (d) and 774.17 and the FTA's Section 4(f) Policy Paper § 1.2.2, the MPRB respectfully requests a meeting as soon as possible to present additional facts and information in support of the MPRB's request for consultation and

[2] The FTA's Office of Program Management has published a fact sheet on preliminary engineering for FTA Major Capital Transit Investment Projects which states that the transition from preliminary to advanced engineering constitutes defacto approval by the FTA of a design affecting 4(f) property: "The quality and reliability of the project information generated during the PE for New Starts projects is essential to FTA's decision to fund a project, which typically occurs shortly after the completion of preliminary engineering and once a project is approved into ***final design.*** (Emphasis original.) This approach requires a different perspective...than has traditionally been associated with PE for major capital investments. For example, varying definitions of preliminary engineering such as "the engineering necessary to complete NEPA' or "30% design" is supplanted—for New Starts projects—**by the expectation that the New Starts preliminary engineering phase will result in a project scope, cost estimate and financial plan that have little, if any, need for change after approval of the project into final design**. PE for New Starts projects generally takes between 15 and 30 months, **depending on...a commitment on the part of project stakeholders to not revisit past planning decisions....**" (emphasis added) [attach copy of fact sheet]

[3] See Attached Exhibit A.

coordination. Consistent with the mandate of *Overton Park*,[4] we strongly urge the FTA to engage in these meetings before it makes any de facto or actual approvals of the Project, makes a finding of Section 4(f) "use" of parkland, determines whether any feasible and prudent avoidance alternatives exist, and makes plans to ensure that the SWLRT Project adopts the least overall harm alterative.

Respectfully submitted,

Liz Wielinski
President, Minneapolis Park & Recreation Board

cc. FTA Administrator, Washington DC

[4] See *Citizens to Pres. Overton Park, Inc. v. Volpe*, 401 U.S. 401 (1971)). For a recent discussion of the extensive procedural and substantive requirements of Section 4(f), see also *Defenders of Wildlife v. North Carolina Dept. of Transportation*, No. 13–2215, 2014 WL 3844086, at *19 (4th Cir. May 13, 2014) (citations omitted) (finding that FHWA approval of a transportation project violated Section 4(f)).

U.S. Department
of Transportation
**Federal Transit
Administration**

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Ohio, Wisconsin

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312-353-2789
312-886-0351 (fax)

January 15, 2015

Liz Wielinski
President
Minneapolis Park & Recreation Board
2117 West River Road
Minneapolis, MN 55411-2227

RE: Southwest Light Rail Project in Minneapolis, Minnesota

Dear Ms. Wielinski:

The Federal Transit Administration (FTA) appreciates your interest in the Southwest Light Rail Transit Project in Minneapolis, MN (the "SWLRT Project"). Thank you for your letter dated January 2, 2015, regarding the Project and requesting a meeting with FTA.

FTA, in coordination with the Metropolitan Council, is preparing a Supplemental Draft Environmental Impact Statement (EIS) for the SWLRT Project in accordance with the National Environmental Policy Act (NEPA). At the current time, there have been no NEPA determinations made regarding the SWLRT Project. Thus, while FTA appreciates your desire to coordinate with FTA during the environmental review process for the SWLRT Project, it would be inappropriate for FTA to have an independent meeting with an individual stakeholder to the project during the pre-decisional phase of the process. Additionally, the New Starts process is separate and apart from the NEPA process and prior to receipt of a Full Funding Grant Agreement (FFGA), FTA does not make a commitment to fund a New Starts project. Completion of NEPA is a prerequisite for receipt of an FFGA.

FTA understands your concerns and will continue to work closely with the Metropolitan Council to complete the required consultation and coordination for the SWLRT Project under NEPA, Section 4(f) of the Federal Transportation Act, and Section 106 of the National Historic Preservation Act. I encourage the Minneapolis Park and Recreation Board (MPRB) to work with the Metropolitan Council in the coming months to further develop the Section 4(f) analysis. FTA will ensure full consideration of MPRB's concerns as part of the development of that analysis. FTA understands the importance of MPRB's role in the environmental review process, including its role as a consulting party, and is seeking MPRB's cooperation in advancing aspects of both the Section 106 consultation process towards a programmatic agreement and a comprehensive Section 4(f) analysis reviewing the areas of concern for MPRB.

If you have any questions related to the project, please contact Ms. Nani Jacobson, Assistant Director, SWLRT Project Office, at (612) 373-3800 or nani.jacobson@metrotransit.org.

Sincerely,

Marisol R. Simón
Regional Administrator

CC: Brian Lamb, Metropolitan Council
Mark Fuhrmann, Metropolitan Council
Nani Jacobson, SWLRT Project Office

DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT, CORPS OF ENGINEERS
180 FIFTH STREET EAST, SUITE 700
ST. PAUL MINNESOTA 55101-1678

REPLY TO
ATTENTION OF
Operations - Regulatory (2009-01283-MMJ)

JAN 15 2015

Ms. Marisol R. Simon
Regional Administrator
Federal Transit Administration
200 West Adams Street
Chicago, Illinois 60606

Dear Ms. Simon:

The U.S. Army Corps of Engineers, St Paul District, Regulatory Branch has received your letter dated December 16, 2014, concerning the designation of lead Federal agency pursuant to 36 CFR § 800.2. for the Southwest Light Rail Project. We agree that it is appropriate for the U.S. Department of Transportation, Federal Transit Administration to act as the lead Federal agency for the purposes of fulfilling our collective responsibilities under section 106 of the National Historic Preservation Act.

We appreciate your efforts to consider potential effects to historic properties and the expertise of the MnDot Cultural Resource Unit in that regard. We would still like to remain a consulting party during the review of this project and would only become more involved in historic property issues if for example measures to avoid effects to a historic property involved regulated impacts to waters of the United States.

If you have any questions concerning our role in the section 106 review please call Brad Johnson at (651) 290-5250. If you have questions about our regulatory program, please call Melissa Jenny at (651) 290-5363.

Sincerely,

for Tamara E. Cameron
Chief, Regulatory Branch

Copies furnished:
Sarah Beimers, Mn SHPO
Greg Mathis, MnDOT CRU
Maya Sarna, FTA
Bill Wheeler, FTA
Nani Jacobson, Metropolitan Council

Wheeler, William (FTA)

From:	Sarah Beimers <sarah.beimers@mnhs.org>
Sent:	Monday, February 02, 2015 8:57 AM
To:	Mathis, Gregory (DOT)
Cc:	Wheeler, William (FTA); Sarna, Maya (FTA); Zaref, Amy CTR (FTA)
Subject:	Re: Southwest LRT: consulting party request

Greg,
We concur with FTA's decision to grant consulting party status to the Cedar-Isles-Dean Neighborhood Association for participation in the Section 106 review process for the Southwest Light Rail Transit Project.
-Sarah

Sarah J. Beimers
Manager of Government Programs & Compliance | State Historic Preservation Office
Minnesota Historical Society | 345 Kellogg Blvd W | St. Paul MN 55102
tel: 651-259-3456 | fax: 651-282-2374 | e: sarah.beimers@mnhs.org

On Thu, Jan 29, 2015 at 10:54 AM, Mathis, Gregory (DOT) <greg.mathis@state.mn.us> wrote:

Sarah,

Under MnDOT CRU's authority delegated by the FTA to assist it many aspects of the Section 106 process for the Southwest Light Rail Transit Project, we have a received a request from the Cedar-Isles-Dean Neighborhood (CIDNA) in Minneapolis to become a consulting party for the Section 106 process for this project (attached email). The portion of the project roughly between the 21st Street and West Lake stations is within CIDNA's boundaries (attached map). Specifically, CIDNA has documented its interest in project effects on two historic properties within its boundaries: Kenilworth Lagoon and Cedar Lake Parkway, both of which are contributing elements to the National Register eligible Grand Rounds. For your reference, there are a number of other listed and eligible properties in the project APE that are within CIDNA's boundaries. These include the Neils House, Grand Rounds (Park Board Bridge No. 4 and portions of Lake of the Isles Parkway, Lake of the Isles, and Cedar Lake,), and a portion of the Lake of the Isles Residential Historic District.

FTA has reviewed and concurs with CIDNA's request. Per 36 CFR 800.2, we request your concurrence with granting consulting party status to CIDNA.

Regards,

Greg

Greg Mathis

Cultural Resources Unit

Office of Environmental Stewardship

Minnesota Department of Transportation

395 John Ireland Boulevard, Mail Stop 620

St. Paul, MN 55155

Office: 651-366-4292 / Fax: 651-366-3603

greg.mathis@state.mn.us

U.S. Department
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312-353-2789
312-886-0351 (fax)

February 17, 2015

Mr. Craig Westgate
Chair
Cedar-Isles-Dean Neighborhood Association
3523 St. Paul Ave.
Minneapolis, MN 55416

RE: Consulting party status; Section 106 review for the Southwest Light Rail Transit Project, SHPO No. 2009-0080

Dear Mr. Westgate,

In your email dated January 21, 2015 to the Minnesota Department of Transportation's Cultural Resources Unit (MnDOT CRU) and forwarded to the Federal Transit Administration, you requested consulting party status for the Section 106 process for the Southwest Light Rail Transit Project. After consultation with the Minnesota State Historic Preservation Office, we concur in this request and hereby offer you consulting party status to your organization.

It is our understanding that the project sponsor, the Metropolitan Council, will share with you copies of all Section 106 documents related to this project.

If you have any questions, please contact Bill Wheeler of my staff at (312) 353-2639 or William.Wheeler@dot.gov, or Greg Mathis with MnDOT CRU at (651) 366-4292 or greg.mathis@state.mn.us.

Sincerely,

Marisol R. Simón
Regional Administrator

cc: Maya Sarna, FTA
William Wheeler, FTA
Sarah Beimers, Minnesota State Historic Preservation Office
Greg Mathis MnDOT CRU
Nani Jacobson, Metropolitan Council

DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT, CORPS OF ENGINEERS
180 FIFTH STREET EAST, SUITE 700
ST. PAUL MN 55101-1678

REPLY TO
ATTENTION OF

FEB 18 2015

Operations
Regulatory (2009-01283-MMJ)

Ms. Nani Jacobson
SWLRT Project Office
6465 Wayzata Blvd., Suite 500
St. Louis Park, Minnesota 55416

Dear Ms. Jacobson:

This letter is in response to your request for Corps of Engineers (Corps) concurrence with the delineation of aquatic resources completed within the Southwest Light Rail Transit (SWLRT) project area. The SWLRT project area includes a 15-mile corridor through Eden Prairie, Minnetonka, Edina, Hopkins, St. Louis Park, and Minneapolis (the Corridor), in Hennepin County, Minnesota.

We have reviewed the SWLRT Delineation Report submitted on December 11, 2013, and the SWLRT Supplemental Delineation Report submitted on October 28, 2014. We have determined that the limits of the aquatic resources within the Corridor have been accurately identified in accordance with current agency guidance including the *Corps of Engineers Wetland Delineation Manual* (1987 Manual) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region. This concurrence is only valid for the review area shown on the attached Figure labeled as SWLRT Delineation Concurrence and PJD (2/18/2015) - Figure 1. The boundaries shown on the attached Figures 2 – 18 accurately reflect the limits of the aquatic resources in the review area.

This concurrence may generally be relied upon for five years from the date of this letter. However, we reserve the right to review and revise our concurrence in response to changing site conditions, information that was not considered during our initial review, or off-site activities that could indirectly alter the extent of wetlands and other resources on-site. Our concurrence may be renewed at the end of this period provided you submit a written request and our staff are able to verify that the determination is still valid.

Please note that the discharge of dredged or fill material into waters of the United States without a Department of the Army permit could subject you to enforcement action. Receipt of a permit from a state or local agency does not obviate the requirement for obtaining a Department of the Army permit.

We have also completed a preliminary jurisdictional determination (JD) for the majority of wetlands identified within the Corridor. This preliminary JD presumes that all of the aquatic resources identified on the attached Preliminary JD form are subject to Corps of Engineers'

jurisdiction under the Clean Water Act. Since the determination is considered preliminary it is not appealable under our administrative appeal procedures (33 CFR 331). If you prefer an appealable approved jurisdictional determination that verifies the jurisdictional status of these aquatic resources you may request one by contacting the Corps representative identified in the final paragraph of this letter.

If this preliminary JD is acceptable, please sign and date both copies of the Preliminary Jurisdictional Determination Form and return one copy to the letterhead address within 15 days from the date of this letter.

We are in the process of completing an approved jurisdictional determination for the remaining waterbodies that were delineated within the Corridor, but not identified on the attached preliminary JD form.

Thank you for your cooperation with the U.S. Army Corps of Engineers regulatory program. If you have any questions, contact me in our St. Paul office at (651) 290-5363, or Melissa.m.jenny@usace.army.mil. In any correspondence or inquiries, please refer to the Regulatory number shown above.

Sincerely,

Melissa Jenny
Project Manager

Copy furnished:
Maya Sarna, FTA
Ben Meyer, BWSR
Stacey Lijewski, Hennepin Co.
LGUs within SWLRT project corridor
Anderson Engineering

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office: St. Paul District | File/ORM #: 2009-01283-MMJ: SWLRT | PJD Date: Feb 18, 2015

State: MN | City/County: Multiple, Hennepin Co.

Nearest Waterbody: Nine Mile, Riley/Purg., Bassett, & Minnehaha Creek

Location: TRS, LatLong or UTM: 58 waterbodies - see attached table
Center point: 45.0043930091592, -93.476658116984

Name/ Address of Person Requesting PJD: Ms. Nani Jacobson
SWLRT Project Office
6465 Wayzata Blvd., Suite 500
St. Louis Park, Minnesota 55416

Identify (Estimate) Amount of Waters in the Review Area:

Non-Wetland Waters: 1000+ linear ft | width | acres | Stream Flow: Perennial

Wetlands: ~250 acre(s) | Cowardin Class: Palustrine, emergent

Name of Any Water Bodies on the Site Identified as Section 10 Waters: Tidal: | Non-Tidal:

☑ Office (Desk) Determination
☑ Field Determination: Date of Field Trip: May 2014

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- ☑ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Anderson Engineering
- ☑ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☑ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps
- ☐ Corps navigable waters' study:
- ☑ U.S. Geological Survey Hydrologic Atlas:
  - ☑ USGS NHD data.
  - ☐ USGS 8 and 12 digit HUC maps.
- ☑ U.S. Geological Survey map(s). Cite quad name: Multiple, Hennepin Co.
- ☑ USDA Natural Resources Conservation Service Soil Survey. Citation: Hennepin Co.
- ☑ National wetlands inventory map(s). Cite name:
- ☐ State/Local wetland inventory map(s):
- ☐ FEMA/FIRM maps:
- ☐ 100-year Floodplain Elevation is:
- ☑ Photographs: ☑ Aerial (Name & Date): 1991-2013 FSA, lidar and Google Earth
  - ☐ Other (Name & Date):
- ☐ Previous determination(s). File no. and date of response letter:
- ☐ Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

2/18/15
Signature and Date of Regulatory Project Manager (REQUIRED)

Nani Jacobson 2/25/2015
Signature and Date of Person Requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

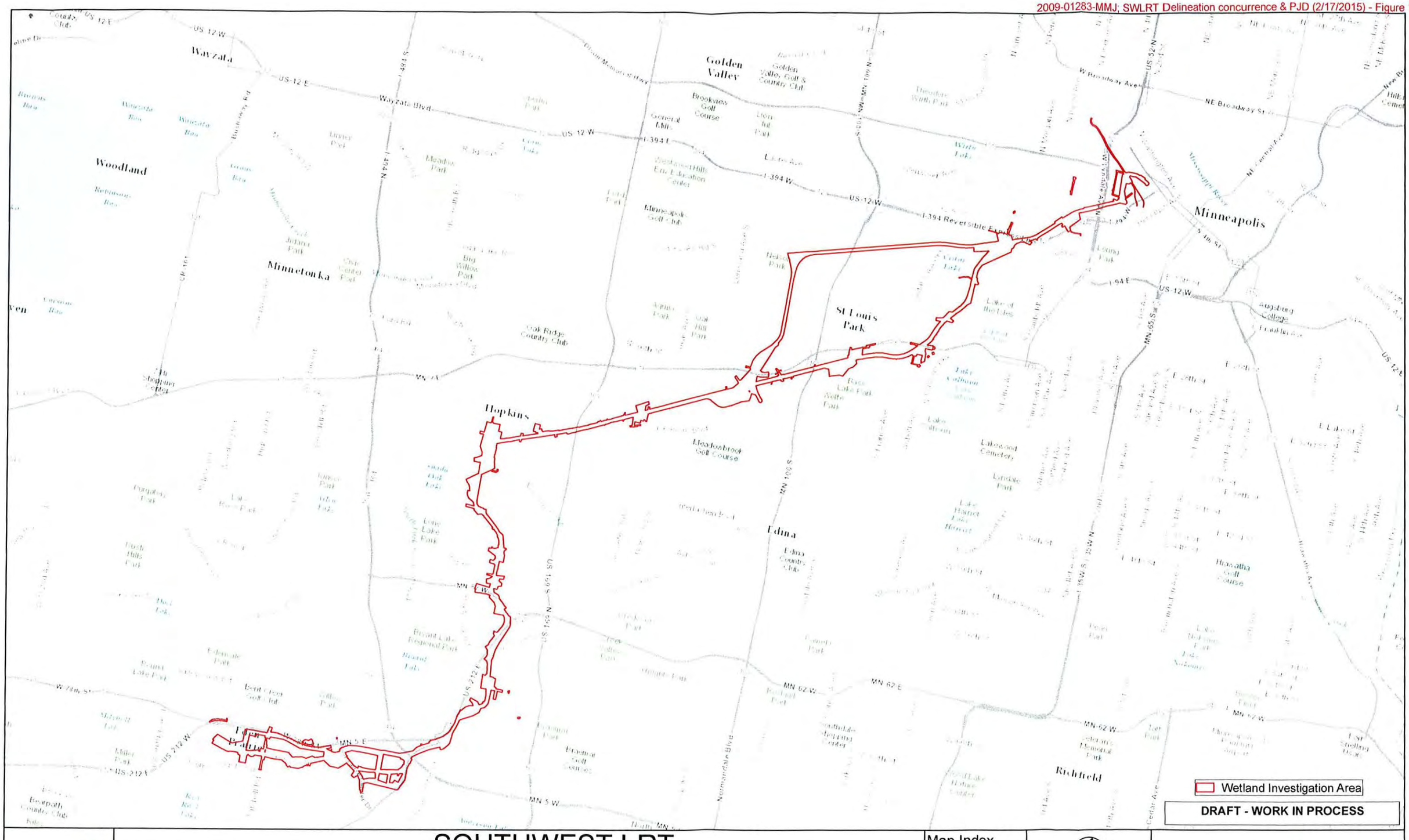
EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

Wetland ID	Cowardin	HGM	Meas	Amount	Unit	Waters type	Lat	Long
DOT-EP-01	PEM	DEPRESS	Area	0.27	ACRE	RPWWD	44.86363	93.46118
DOT-EP-02	PEM	DEPRESS	Area	0.22	ACRE	RPWWD	44.86039	93.45261
DOT-EP-03	PEM	DEPRESS	Area	0.27	ACRE	RPWWD	44.8604	93.44886
DOT-EP-04	PEM	DEPRESS	Area	0.74	ACRE	RPWWD	44.86122	93.44479
DOT-EP-07	PEM	DEPRESS	Area	0.01	ACRE	RPWWD	44.86691	93.41663
DOT-EP-08	PEM	DEPRESS	Area	0.84	ACRE	RPWWD	44.88442	93.41068
DOT-EP-09	PEM	DEPRESS	Area	0.7	ACRE	RPWWD	44.88343	93.41263
DOT-SLP-10	PEM	DEPRESS	Area	0.01	ACRE	RPWWD	44.94064	93.34796
DOT-EP-12	PEM	DEPRESS	Area	0.01	ACRE	RPWWD	44.86187	93.47227
DOT-EP-13	PEM	DEPRESS	Area	0.02	ACRE	RPWWD	44.86214	93.47045
DOT-EP-14	PEM	DEPRESS	Area	0.01	ACRE	RPWWD	44.86125	93.45195
DOT-EP-15	PEM	DEPRESS	Area	0.01	ACRE	RPWWD	44.86113	93.45047
DOT-EP-16	PEM	DEPRESS	Area	0.01	ACRE	RPWWD	44.86156	93.44886
DOT-EP-17	PEM	DEPRESS	Area	2.21	ACRE	RPWWD	44.86196	93.4409
DOT-EP-18	PEM	DEPRESS	Area	0.1	ACRE	RPWWD	44.86191	93.42481
DOT-EP-19	PEM	DEPRESS	Area	0.1	ACRE	RPWWD	44.86606	93.41999
DOT-EP-20	PEM	DEPRESS	Area	0.08	ACRE	RPWWD	44.86658	93.41867
DOT-EP-21	PEM	DEPRESS	Area	0.01	ACRE	RPWWD	44.89206	93.41789
DOT-EP-22	PEM	DEPRESS	Area	0.08	ACRE	RPWWD	44.89212	93.41541
EP-EP-03	PEM	DEPRESS	Area	0.16	ACRE	RPWWD	44.86019	93.46539
EP-EP-07	PEM	DEPRESS	Area	4.36	ACRE	RPWWD	44.85743	93.4616
EP-EP-08	PEM	DEPRESS	Area	1.72	ACRE	RPWWD	44.85841	93.45883
EP-EP-09	PEM	DEPRESS	Area	0.57	ACRE	RPWWD	44.85914	93.45922
EP-EP-11	PEM	DEPRESS	Area	9.89	ACRE	RPWWD	44.85832	93.45444
EP-EP-12	PEM	DEPRESS	Area	2.75	ACRE	RPWWD	44.85727	93.45683
EP-EP-14	PUB	DEPRESS	Area	1.09	ACRE	RPWWD	44.85773	93.44919
EP-EP-15	PEM	DEPRESS	Area	90	ACRE	RPWWD	44.85835	93.44834
EP-EP-16	PEM	DEPRESS	Area	8	ACRE	RPWWD	44.85884	93.44673
EP-EP-17	PEM	DEPRESS	Area	2.23	ACRE	RPWWD	44.85907	93.44839
EP-EP-20	PUB	LACUSTRI	Area	15.86	ACRE	RPWWD	44.86142	93.43177
EP-EP-22	PEM	DEPRESS	Area	0.2	ACRE	RPWWD	44.86028	93.44542
EP-EP-23	PEM	DEPRESS	Area	3.74	ACRE	RPWWD	44.85676	93.45879
EP-EP-24	PUB	DEPRESS	Area	0.38	ACRE	RPWWD	44.85974	93.44511
DIG-EP-EP-04	PUB	DEPRESS	Area	0.65	ACRE	RPWWD	44.86085	93.44738
NM-EP-01	PEM	DEPRESS	Area	1.8	ACRE	RPWWD	44.87263	93.41123
NM-EP-02	PEM	DEPRESS	Area	6.22	ACRE	RPWWD	44.87278	93.41402
NM-EP-03	PEM	DEPRESS	Area	2.16	ACRE	RPWWD	44.87277	93.41146
NM-EP-04	PEM	DEPRESS	Area	1.17	ACRE	RPWWD	44.87263	93.41123
NM-EP-05	PUB	DEPRESS	Area	0.31	ACRE	RPWWD	44.87428	93.41362
NM-EP-06	PEM	DEPRESS	Area	4.12	ACRE	RPWWD	44.87719	93.4113
NM-EP-08	PEM	DEPRESS	Area	2.25	ACRE	RPWWD	44.878	93.41011
NM-EP-09	PEM	DEPRESS	Area	0.66	ACRE	RPWWD	44.87941	93.41117
NM-HOP-13	PEM	DEPRESS	Area	2.67	ACRE	RPWWD	44.91378	93.42063
NM-HOP-16	R1UB	DEPRESS	Linear	9	MILE	RPWWD	44.9186	93.41666
MTA-MTA-05	PUB	DEPRESS	Area	0.99	ACRE	RPWWD	44.89733	93.41472
MTA-MTA-06	PEM	DEPRESS	Area	0.01	ACRE	RPWWD	44.89894	93.41391

Wetland ID	Cowardin	HGM	Meas	Amount	Unit	Waters type	Lat	Long
MTA-MTA-07	PEM	DEPRESS	Area	0.18	ACRE	RPWWD	44.89932	93.41399
MTA-MTA-08	PEM	DEPRESS	Area	0.34	ACRE	RPWWD	44.89971	93.41361
MTA-MTA-09	PEM	DEPRESS	Area	36.2	ACRE	RPWWD	44.90153	93.41321
MTA-MTA-10	PUB	DEPRESS	Area	0.55	ACRE	RPWWD	44.90587	93.42214
MTA-MTA-11	PEM	DEPRESS	Area	11.79	ACRE	RPWWD	44.90786	93.42274
MTA-MTA-12	PUB	DEPRESS	Area	2.8	ACRE	RPWWD	44.91456	93.42308
MTA-MTA-13	PUB	DEPRESS	Area	0.25	ACRE	RPWWD	44.9115	93.42296
MC-SLP-01	R1UB	DEPRESS	Linear	22	MILE	RPWWD	44.93011	93.3805
MC-SLP-02	R1UB	DEPRESS	Linear	22	MILE	RPWWD	44.93013	93.36633
MC-SLP-03	PUB	DEPRESS	Area	0.2	ACRE	RPWWD	44.93221	93.36684
MC-SLP-05	PEM	DEPRESS	Area	1.9	ACRE	RPWWD	44.93233	93.36497
MC-MPL-13	R1UB	DEPRESS	Linear	1600	FOOT	RPWWD	44.95523	93.31603



SOUTHWEST LRT

2014 Wetland Investigation Area

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Wetland Management Organization Boundary
Municipalities
Hennepin Co Parcels
Wetland Investigation Area
Sample Point
2014 Delineated Wetland
2013 Delineated Wetland
2013 Digitized Wetland

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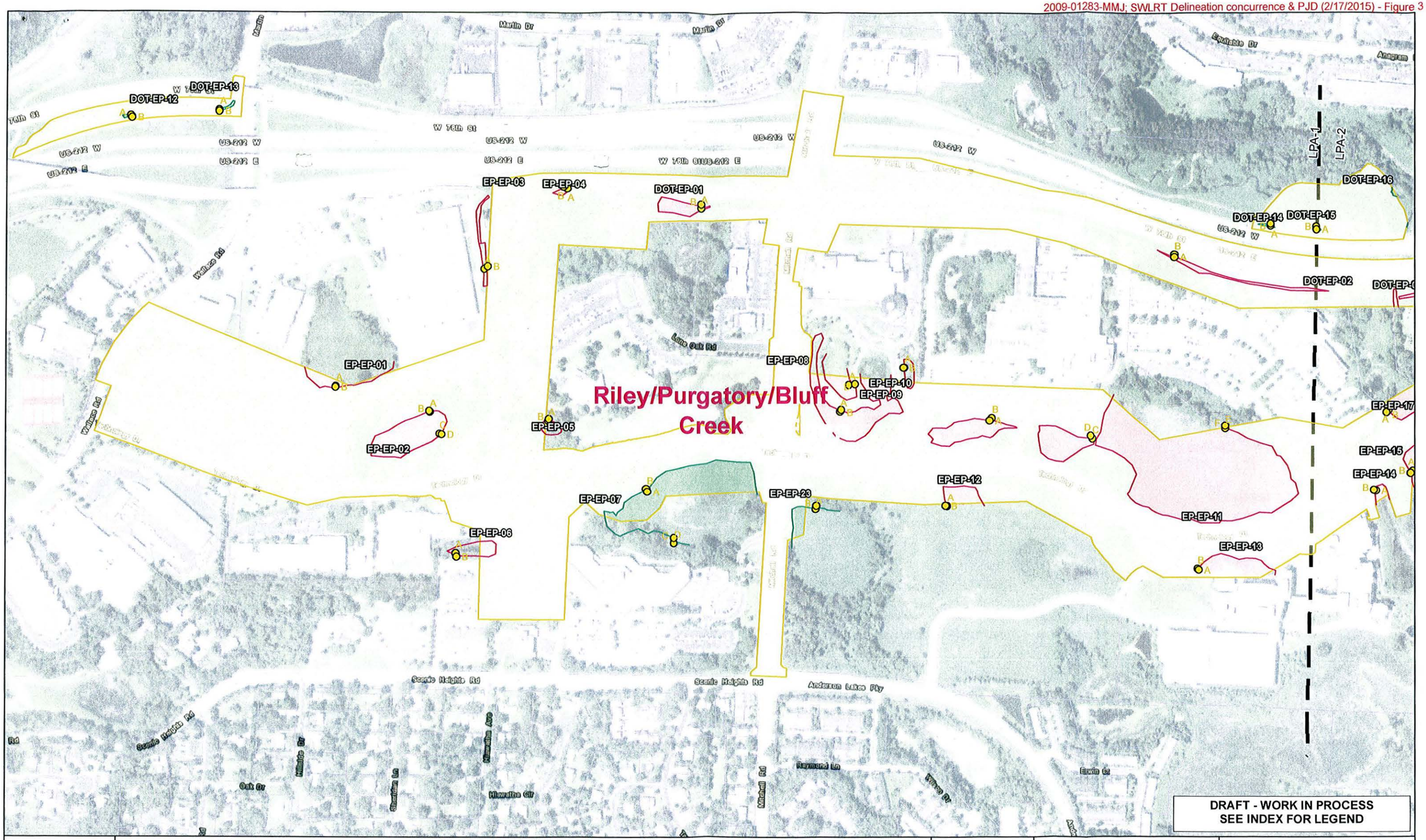

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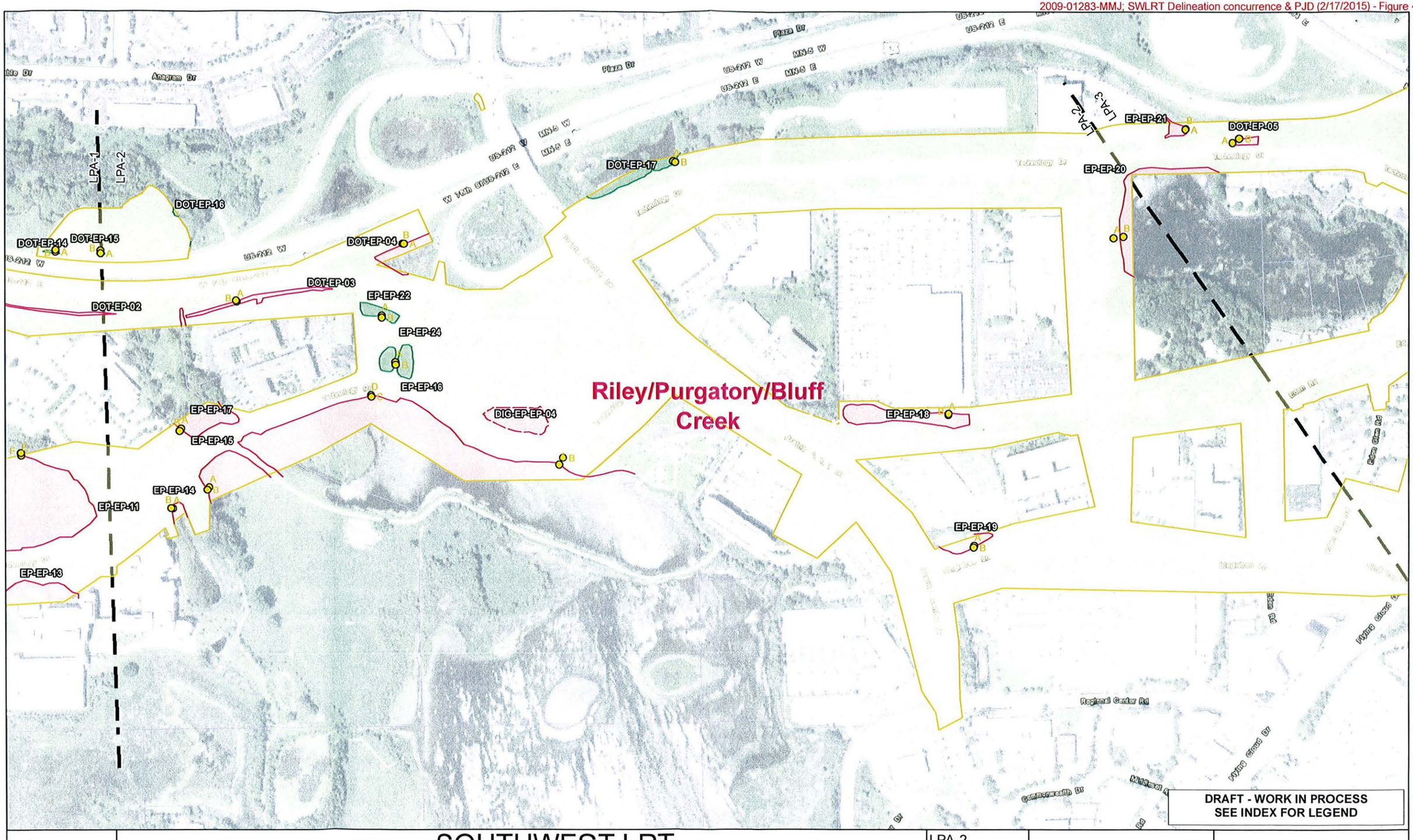

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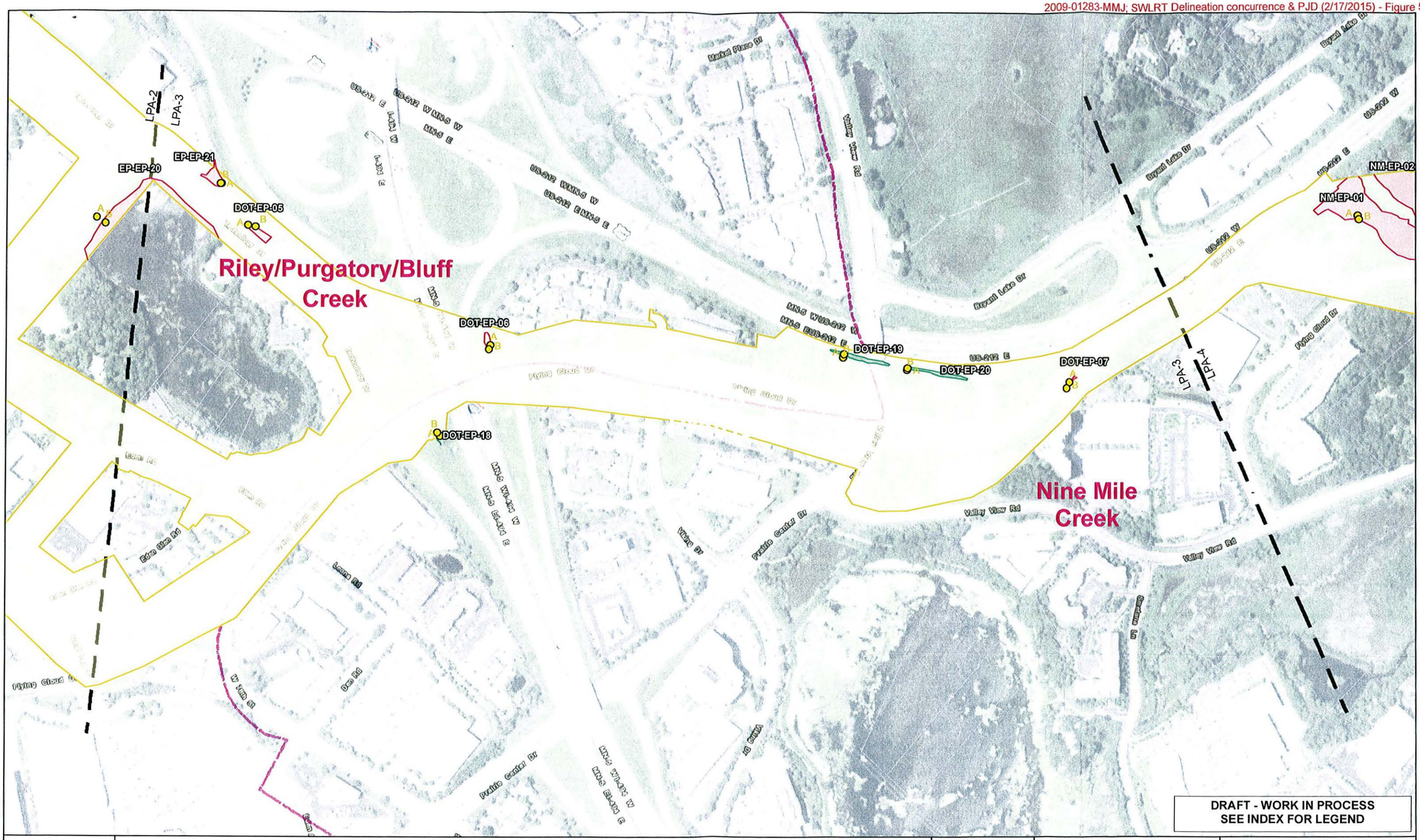

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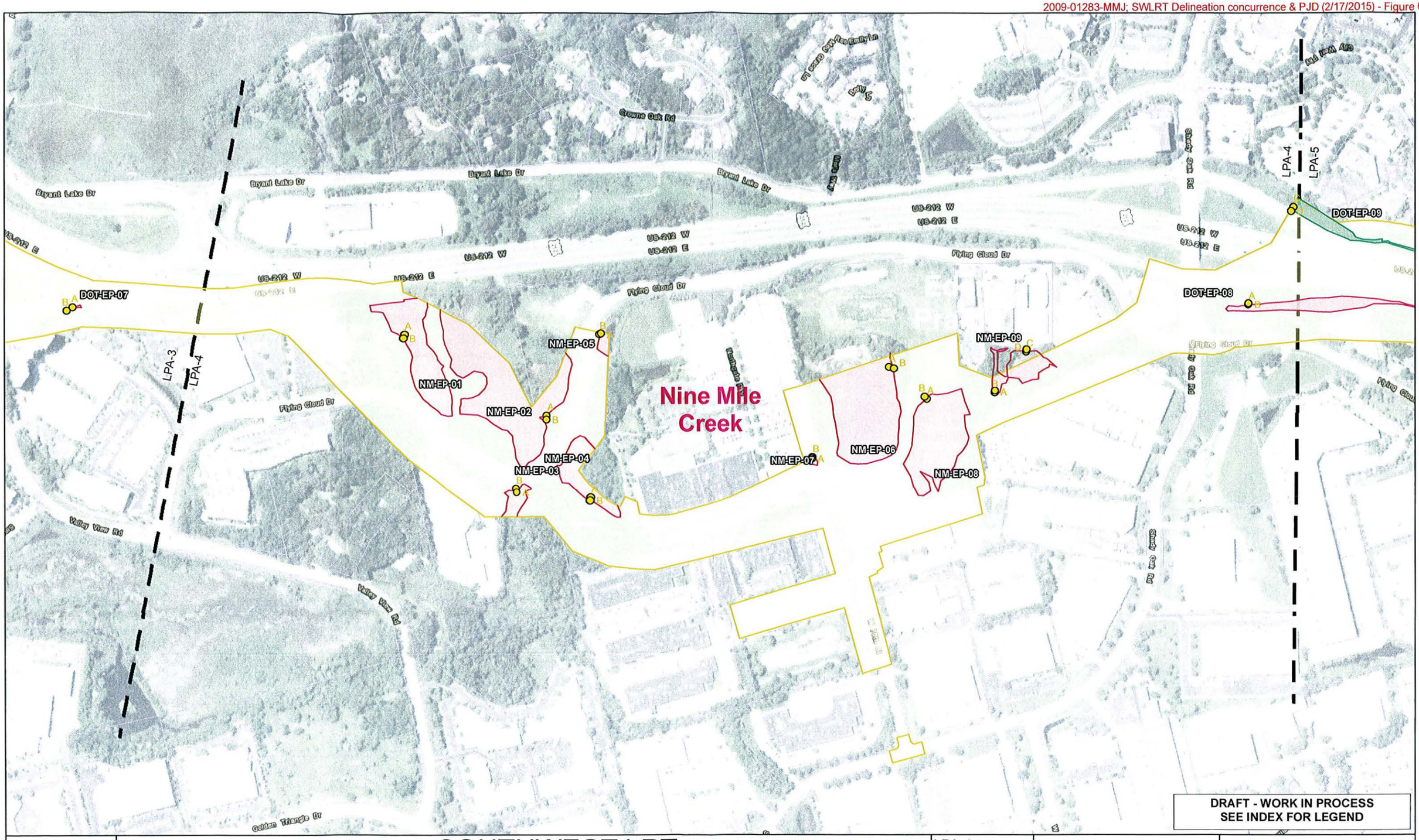

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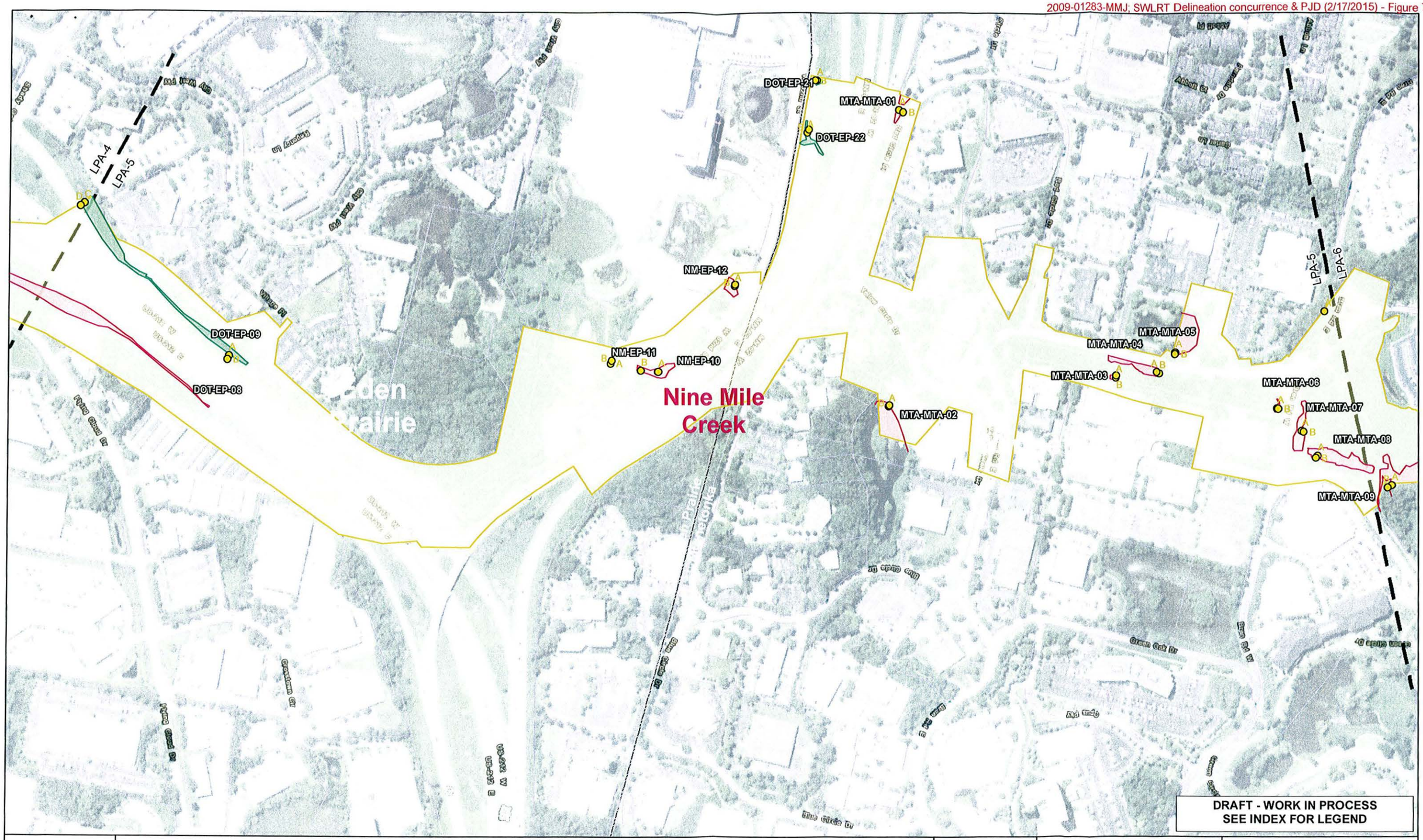

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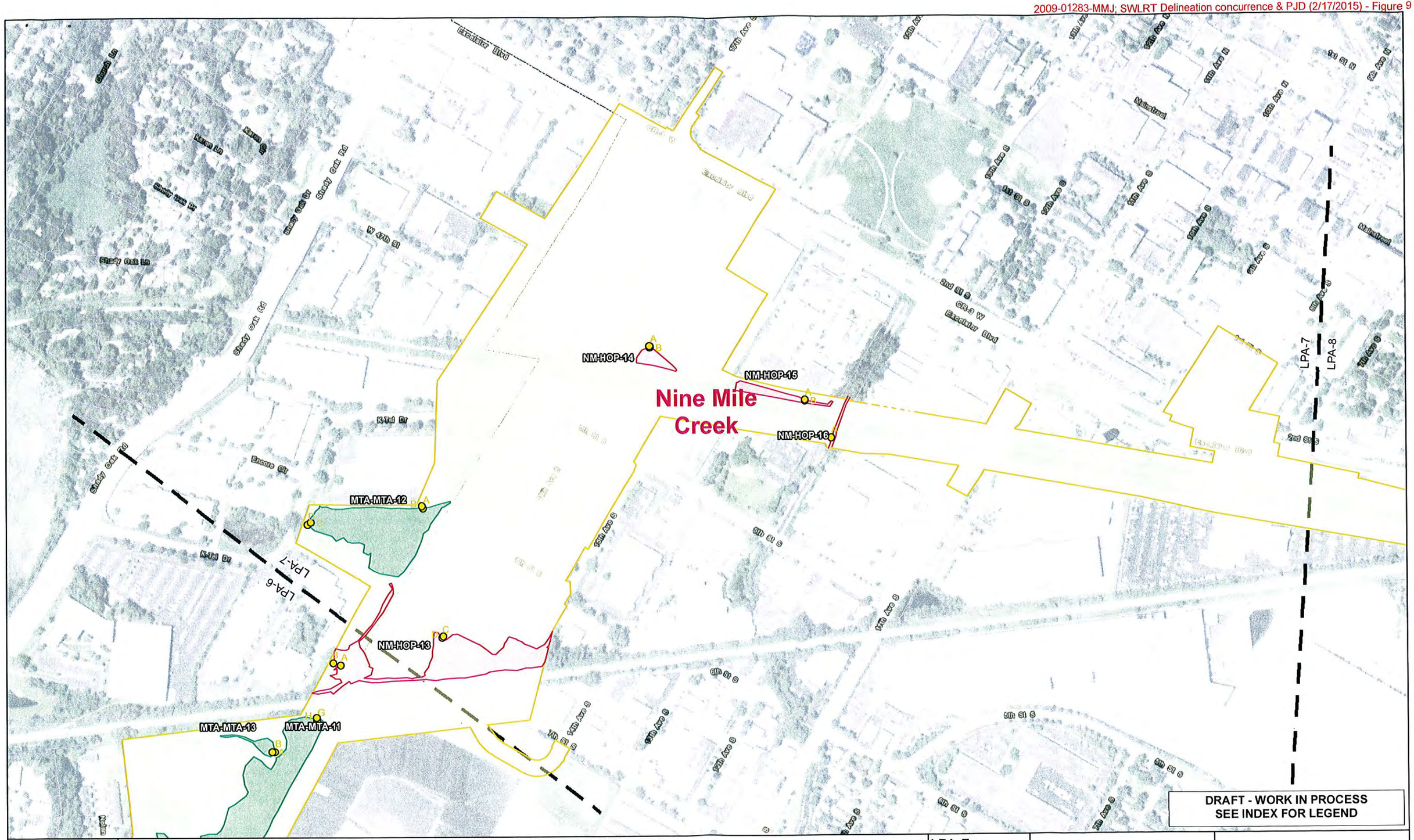

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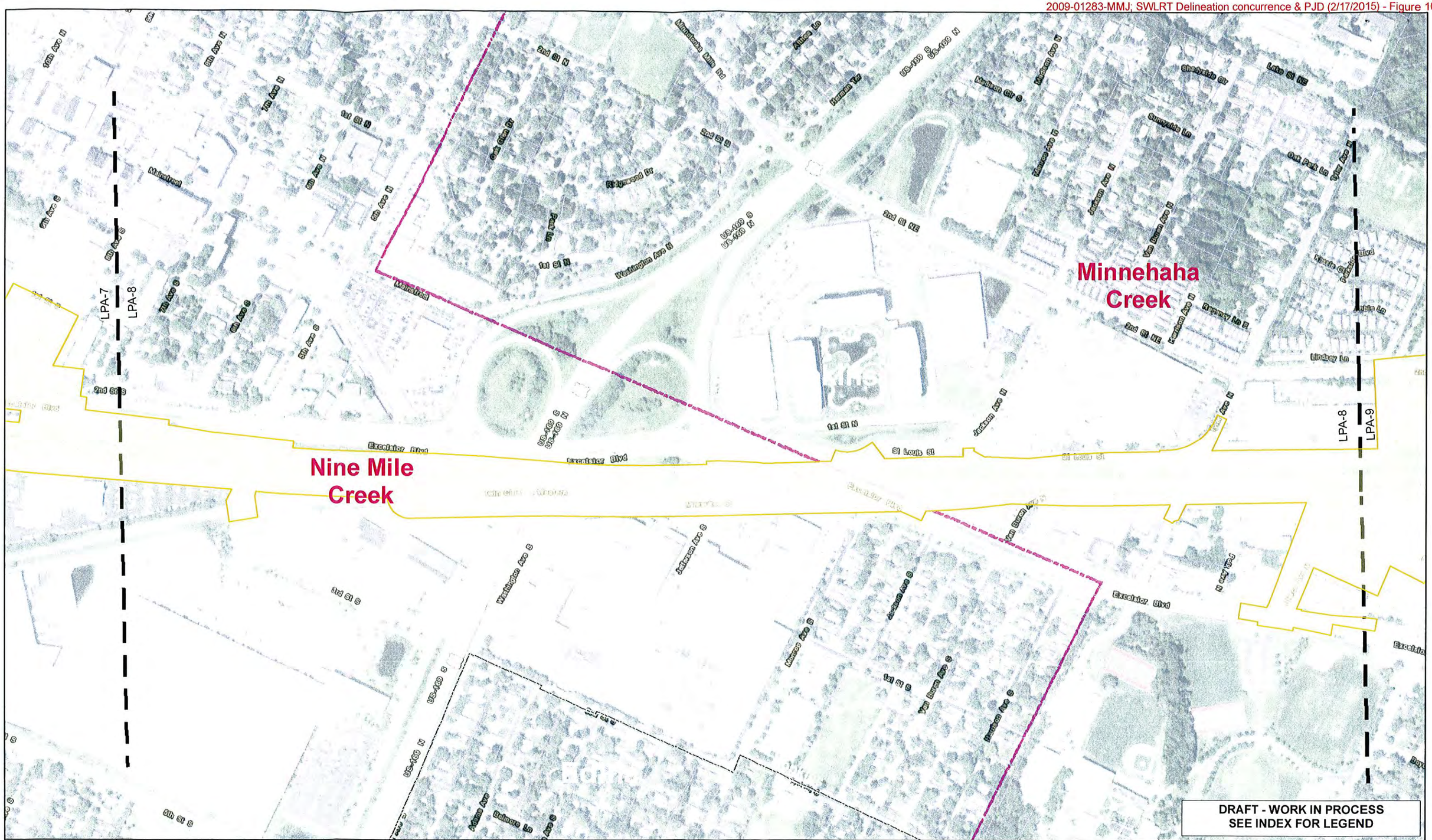

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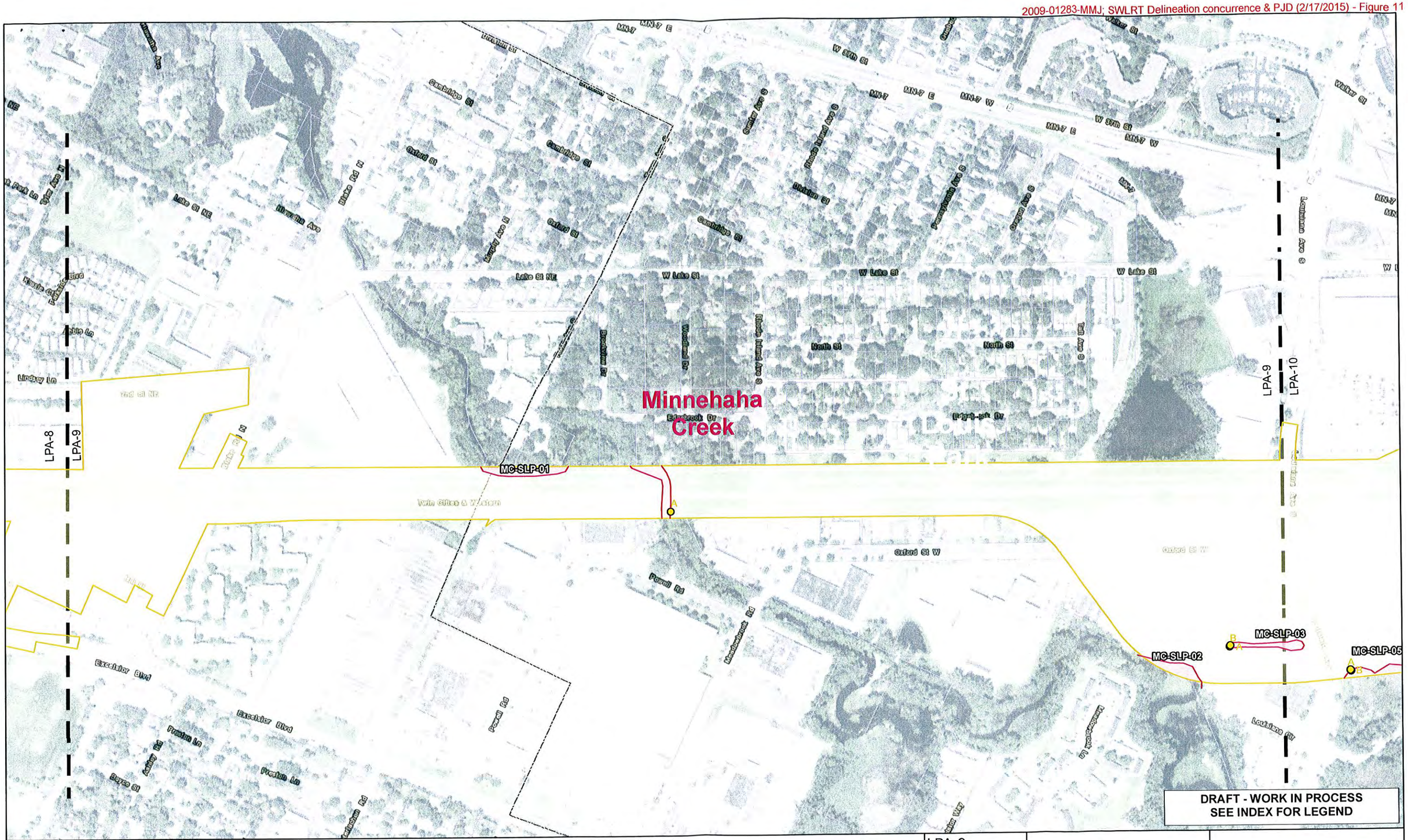

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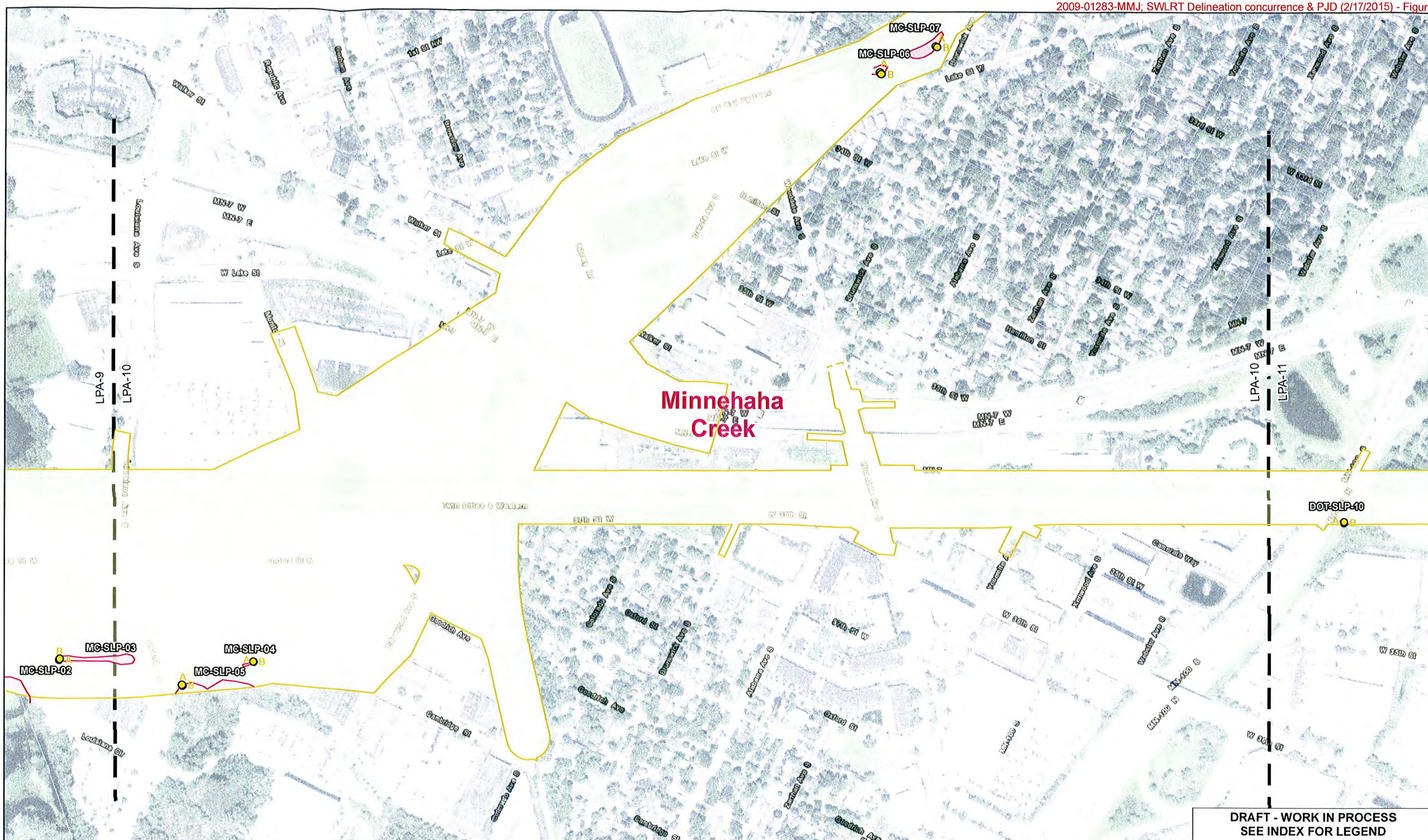

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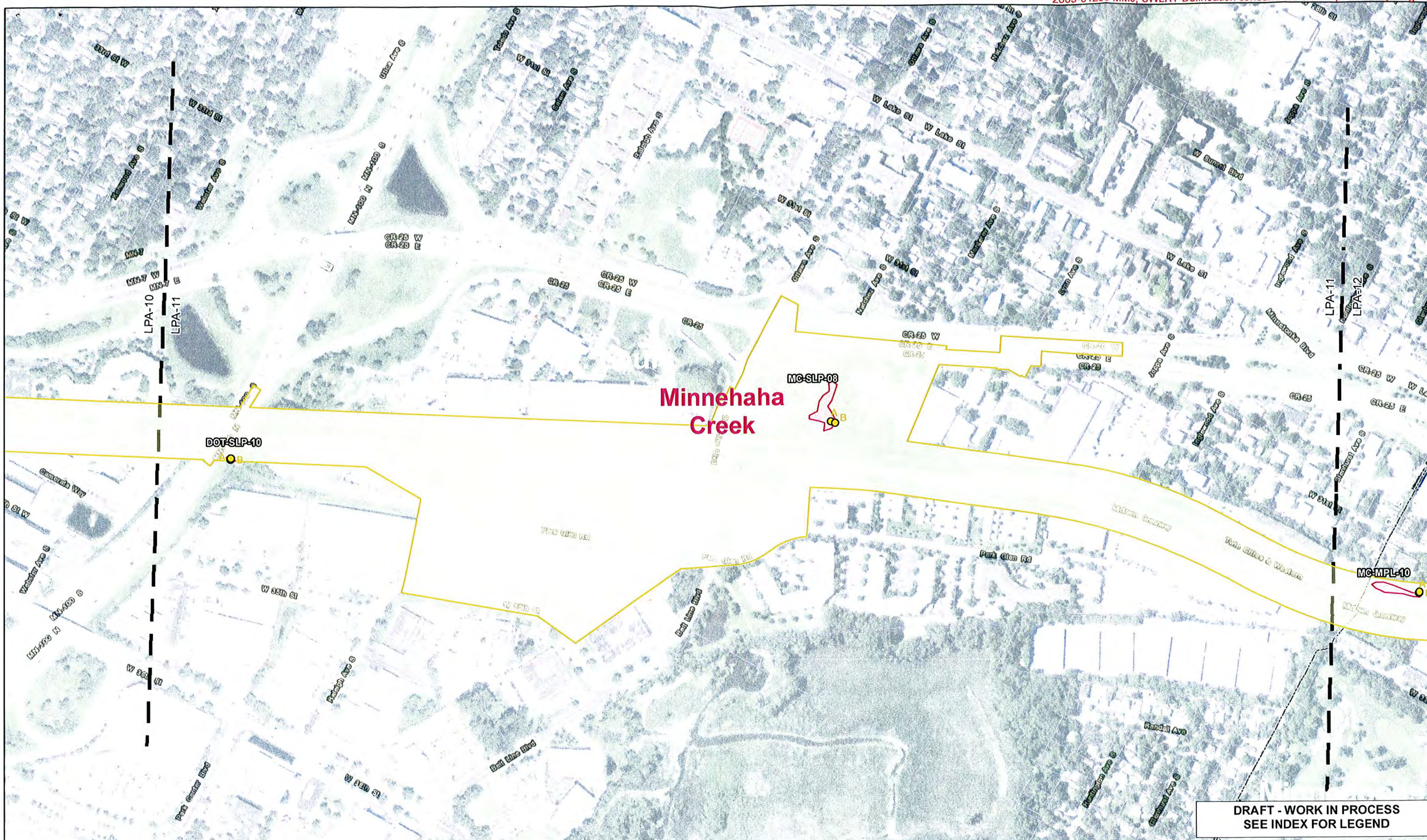
Scale

METROPOLITAN COUNCIL



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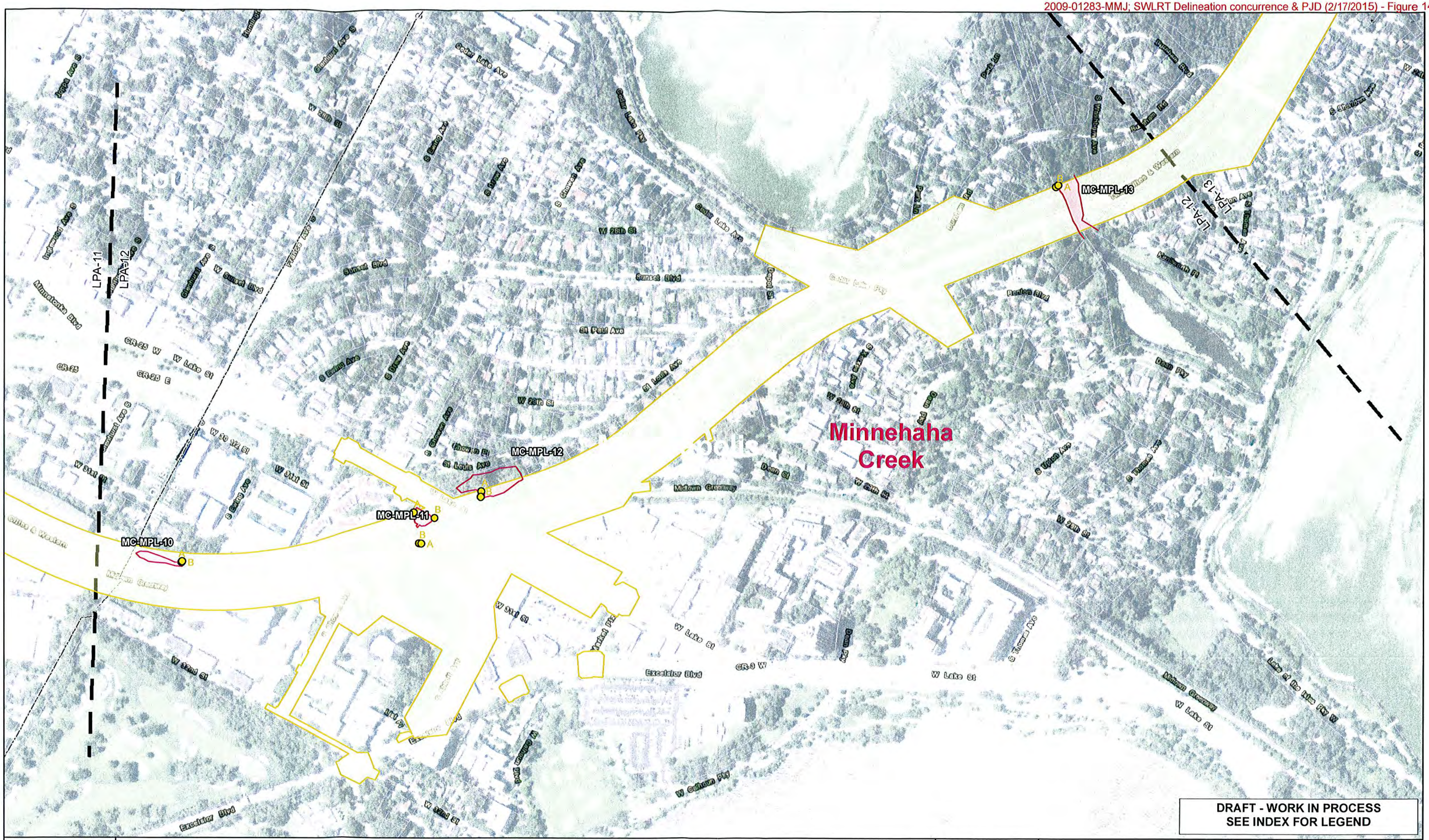

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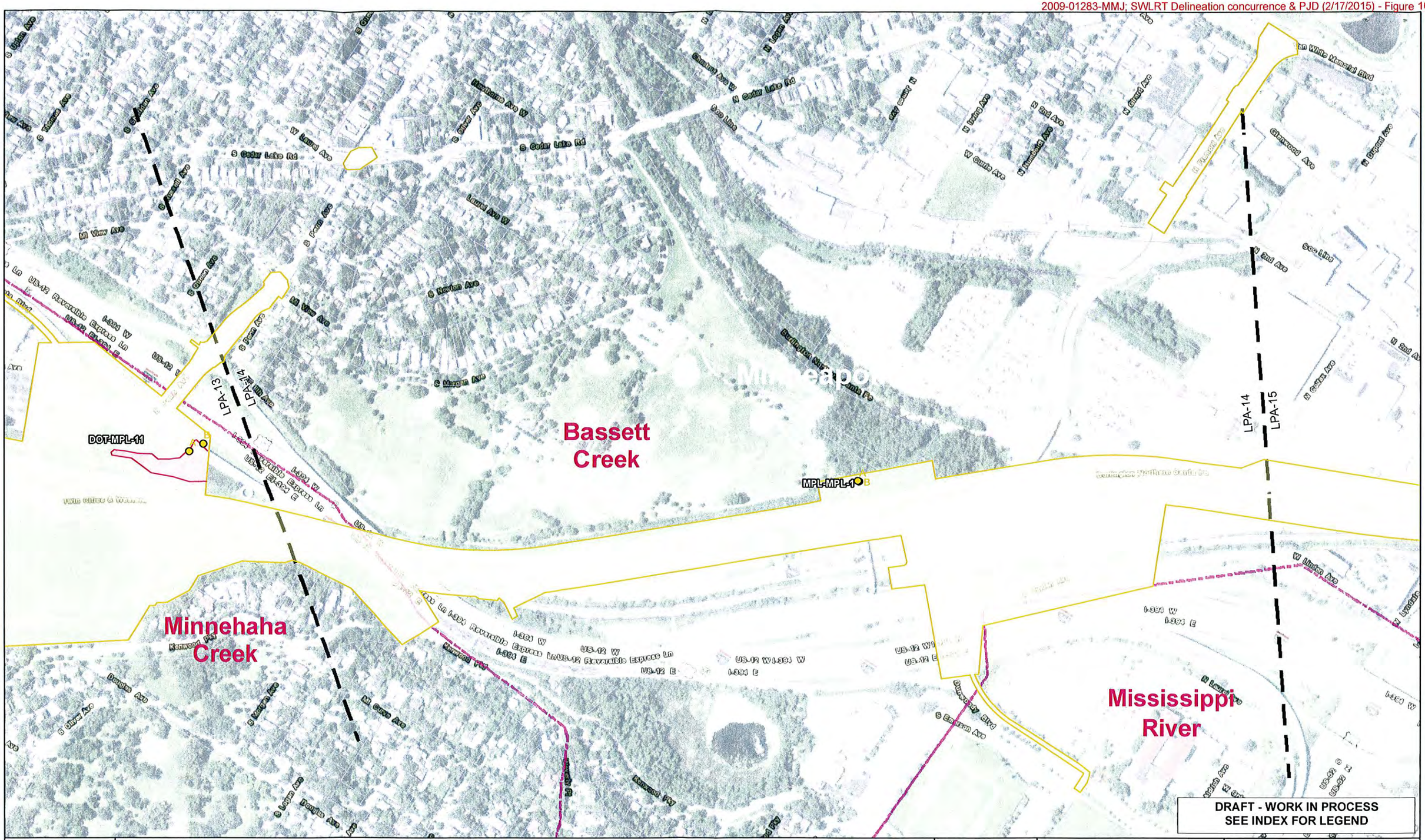
METROPOLITAN
COUNCIL



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Scale

Mississippi River

Bassett Creek

Mississippi River

LPA-14

LPA-15

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SEE INDEX FOR LEGEND

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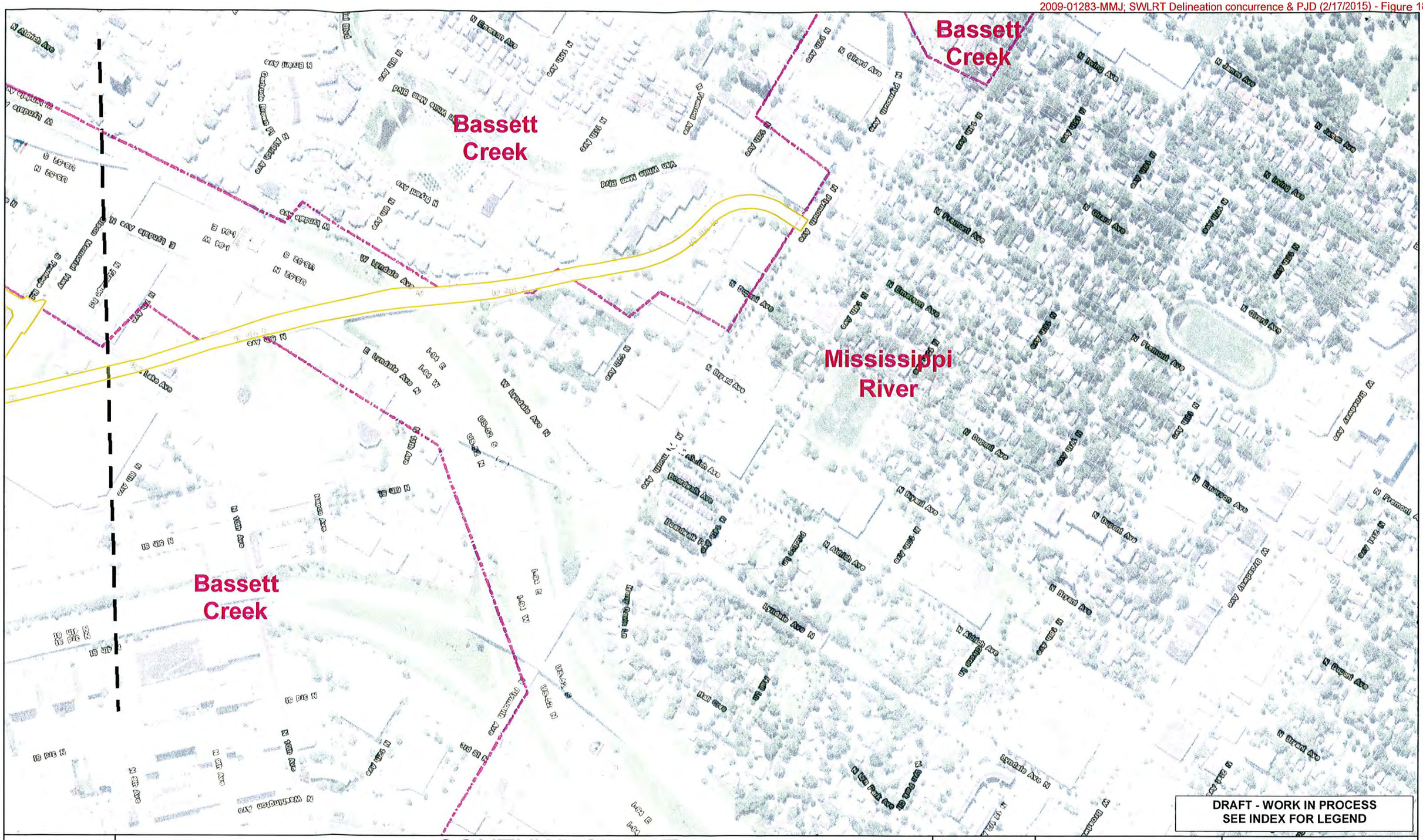
METROPOLITAN COUNCIL



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Appendix F
Development and Evaluation of Design Adjustments Since Publication of the Draft EIS

APPENDIX F

Development and Evaluation of Design Adjustments Since Publication of the Draft EIS

This appendix provides a description of the development and evaluation of design adjustments to LRT 3A and LRT 3A-1 that occurred after the Draft Environmental Impact Statement (Draft EIS) was published in October 2012. In general, the design adjustment process was initiated in January 2013 after the close of the Draft EIS public comment period and concluded in April and July 2014 with the identification by the Council of the design adjustments to be incorporated into the LPA, including light rail and related design adjustments and freight rail modifications. The LPA includes double-tracked light rail line between Minneapolis and Eden Prairie with seventeen light rail stations and an Operations and Maintenance Facility (OMF). Under the LPA, the proposed light rail alignment would run through the Golden Triangle/Opus areas, to Hennepin County Regional Railroad Authority (HCRRA) property through Hopkins and St. Louis Park, then along the Kenilworth Corridor through Minneapolis to Royalston Station and connecting to Target Field Station. Two of the five build alternatives in the Draft EIS include the LPA (LRT 3A and LRT 3A-1). The transit improvements included in LRT 3A and LRT 3A-1 are coupled with the proposed relocation or co-location of TC&W freight trains currently operating along the Bass Lake Spur and Kenilworth Corridor. LRT 3A includes the proposed relocation of TC&W trains to the MN&S Spur and Wayzata Subdivision, while LRT 3A-1 includes the continued operations of TC&W freight trains currently operating along the Bass Lake Spur and Kenilworth Corridor.

This appendix provides the following: an overview of the design adjustment process to LRT 3A and LRT 3A-1, inclusive of the LPA; coordination activities that have occurred since publication of the Draft EIS; and a detailed review of the development and evaluation of light rail-related design adjustments and freight rail modifications since publication of the Draft EIS that could result in new significant impacts not addressed in the Draft EIS in the Eden Prairie Segment, for the proposed Hopkins Operations and Maintenance Facility (OMF), and in the St. Louis Park/Minneapolis Segment. This appendix includes the following sections:

1.0 Overview of the Design Adjustment Process
2.0 Coordination
3.0 Eden Prairie Segment
4.0 Potential Operations and Maintenance Facility Sites
5.0 St. Louis Park/Minneapolis Segment
6.0 Locally Requested Capital Investments

1.0 Overview of the Design Adjustment Process

This section summarizes the process used by the Council to identify design adjustments to the LRT 3A and LRT 3A-1 since the end of the Draft EIS public comment period on December 31, 2012. The project team developed and evaluated the design adjustments in response to comments submitted on the Draft EIS, including proposed adjustments to: accommodate local goals and objectives; improve the performance of the proposed light rail extension; reduce project costs; and avoid or minimize the project's adverse environmental impacts.

The project's ongoing engagement and communication with the affected public has been a fundamental element of planning for the Southwest LRT Project, including the design adjustment process implemented since completion of the Draft EIS public comment period. That general process and timeframe is illustrated in Exhibit F-1.

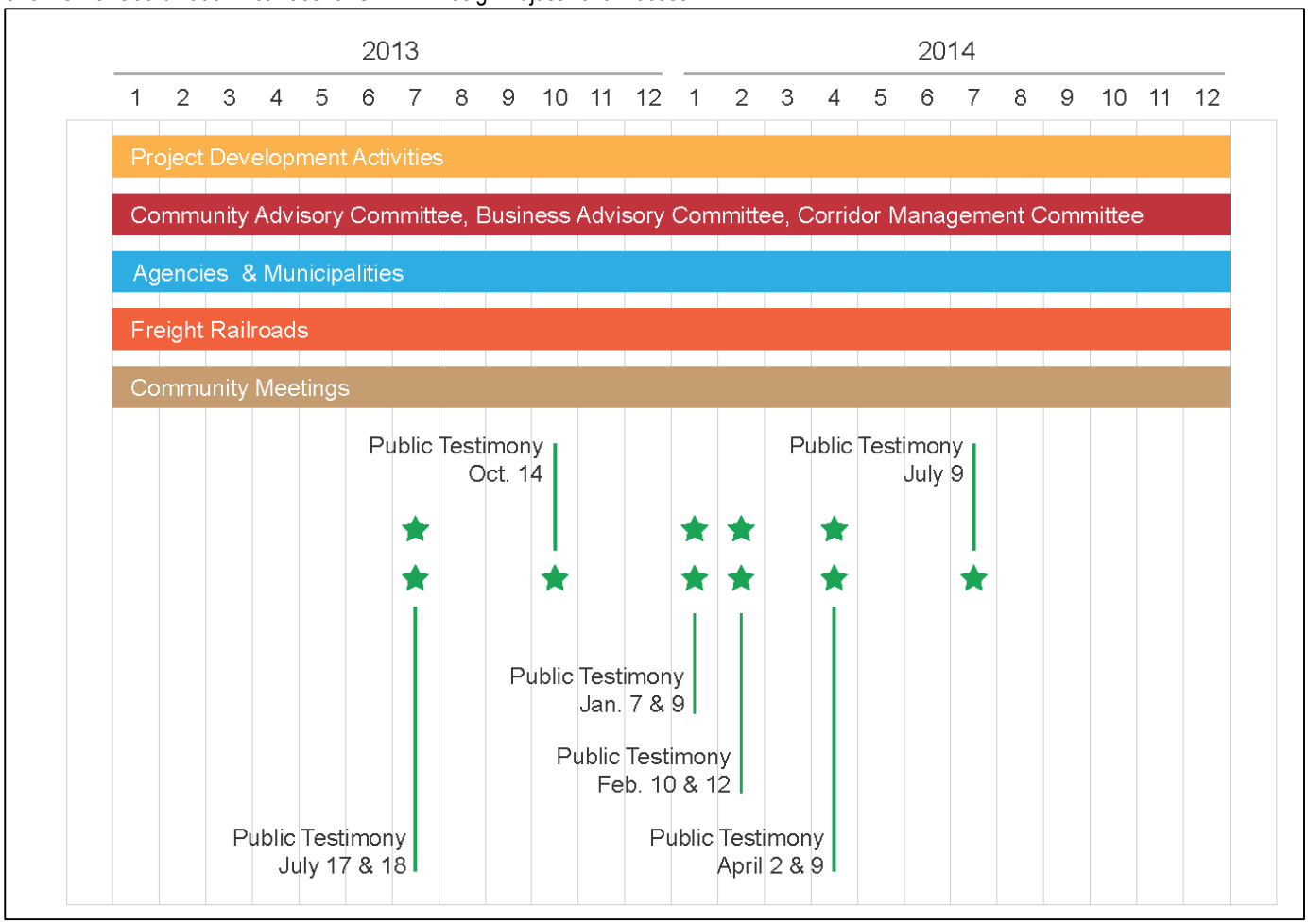
The design adjustment process implemented since completion of the Draft EIS was supported by the project's Technical Project Advisory Committee (TPAC), which is composed of staff from the Council's Southwest LRT Project Office, Hennepin County, MnDOT, the cities of Eden Prairie, Minnetonka, Hopkins, St. Louis Park, and Minneapolis, Three Rivers Park District, and the Council's Metro Transit Rail Operations

division. Community and business representatives serve on the project's Business Advisory Committee (BAC) and Community Advisory Committee (CAC), which provide input and recommendations to the Corridor Management Committee (CMC), including design adjustments developed and evaluated since publication of the Draft EIS.

Since early 2013, the Council held approximately 20 public open houses and community meetings (see Chapter 4 of the Supplemental Draft EIS) and provided dozens of presentations at the request of various groups throughout the project corridor. Meetings with the public have been tailored to present information and solicit feedback on specific project issues. Chapter 4 of the Supplemental Draft EIS provides additional detail on the project's public involvement process and activities since the end of the Draft EIS public comment period, and it provides additional information on the makeup of the CAC and BAC.

EXHIBIT F-1

Overview of Coordination Activities for SWLRT Design Adjustment Process



On March 31, 2014, Council staff released a draft recommendation of the design adjustments to be incorporated into the proposed project. Following receipt of public comment on those recommendations at its meeting on April 2, 2014, the CMC adopted a resolution recommending the design adjustments to be incorporated into the proposed project's scope and budget. On April 9, 2014, the Council identified the adjustments to be incorporated into the proposed project. The Council's action was based on its consideration of the technical analysis of the range of potential design adjustments to the proposed project, as summarized in Section 2.3 of this Supplemental Draft EIS. The Council also considered comments received from the public, agencies, jurisdictions, and committees within the project's public involvement and agency coordination activities since the close of the Draft EIS public comment period, as summarized in Chapter 4 of this Supplemental Draft EIS, including public testimony received at its meeting on April 9, 2014. On July 9, 2014, the CMC considered additional design adjustments within the City of Minneapolis that were proposed

in a memorandum of understanding between the Council and the City of Minneapolis (see Appendix D, Sources and References Cited, for instructions on how to access the executed memorandum). The CMC endorsed the additional proposed design adjustments, which the Council subsequently approved on July 9, 2014.

2.0 Coordination

This section provides a description of coordination activities that have occurred since publication of the Draft EIS. These activities helped to support the development and evaluation of design adjustments to LRT 3A and LRT 3A-1 described in Sections 3.0, 4.0, and 5.0 of this appendix, related to the Eden Prairie Segment, the Hopkins OMF, and the St. Louis Park/Minneapolis Segment.

2.1 Eden Prairie Segment

The process used to develop and evaluate the light rail improvements described in Section 3.0 of this appendix included the following coordination activities:

- Various public involvement activities, as described in Chapter 4 of the Supplemental Draft EIS. As illustrated in Exhibit F-1, these activities spanned the entire length of the segment's design adjustment process and included the opportunity to submit comments via printed public comment cards. Opportunities to provide public testimony were also available (see Table 4.4-1 in Chapter 4 of this Supplemental Draft EIS).
- Coordination with the project's participating agencies, as described in Chapter 4 of the Supplemental Draft EIS.
- Approximately 20 project-sponsored meetings associated with the Council's technical issue resolution process described in Chapter 4 of the Supplemental Draft EIS. Those meetings included, at various times, staff and/or consultants from the Council, MnDOT, Hennepin County, the City of Eden Prairie, Riley Purgatory Bluff Creek Watershed District, and SouthWest Transit.

2.2 Hopkins OMF

The process used to develop and evaluate the proposed location of the OMF described in Section 4.0 of this appendix included the following coordination activities:

- Various public involvement activities, as described in Chapter 4 of the Supplemental Draft EIS. As illustrated in Exhibit F-1, these activities spanned the entire length of the segment's design adjustment process and included the opportunity to submit comments via printed public comment cards. Opportunities to provide public testimony were also available (see Table 4.4-1 in Chapter 4 of the Supplemental Draft EIS).
- Coordination with the project's participating agencies, as described in Chapter 4 of the Supplemental Draft EIS.
- Approximately 25 project-sponsored meetings associated with the Council's technical issue resolution process described in Chapter 4 of the Supplemental Draft EIS. Those meetings included, at various times, staff and/or consultants from the Council, MnDOT, Hennepin County, and the cities of Eden Prairie, Minnetonka, Hopkins, St. Louis Park, and Minneapolis.

2.3 St. Louis Park/Minneapolis Segment

The process used to develop and evaluate light rail improvements and freight rail modifications described in Section 3 of this appendix included the following coordination activities:

- Various public involvement activities, as described in Chapter 4 of the Supplemental Draft EIS. As illustrated in Exhibit F-1, these activities spanned the entire length of the segment's design adjustment process and included the opportunity to submit comments via printed public comment cards. Opportunities to provide public testimony were also available (see Table 4.4-1 in Chapter 4 of the Supplemental Draft EIS).

- Coordination with the project's participating agencies, as described in Chapter 4 of the Supplemental Draft EIS.
- Project-sponsored meetings associated with the Council's technical issue resolution process described in Chapter 4 of the Supplemental Draft EIS. Those meetings included, at various times, staff and/or consultants from the Metropolitan Council, MnDOT, Hennepin County, the cities of Hopkins, Minneapolis, St. Louis Park, the Three Rivers Parks District, the Minneapolis Park and Recreation Board, Xcel Energy, and TranSystems, and representatives from BNSF, CP, and TC&W freight railroads.
- Attendance of and, at times, public comment by representatives from one or more freight railroads and/or freight rail shippers at approximately 30 project-sponsored committee or public involvement meetings (as documented in Chapter 4 of the Supplemental Draft EIS and in Section 2.0 of this appendix, respectively) or at meetings held between project staff and consultants and freight railroad representatives.

3.0 Eden Prairie Segment

This section provides a summary of the design adjustments to the LPA in the Eden Prairie Segment that were developed and evaluated after publication of the Draft EIS. This section first provides background information on the light rail and related improvements in the segment that were evaluated in the Draft EIS. Second, this section provides a description of the range of design adjustments to the LPA considered by the Council within the Eden Prairie Segment and how those potential design adjustments were evaluated.

3.1 Background

Four of the five light rail build alternatives evaluated in the Draft EIS (LRT 3A, LRT 3A-1, LRT 3C-1, and LRT 3C-2) included common proposed light rail and related improvements in Eden Prairie. Those alternatives, shown on Exhibit 2.2-1 and described in Section 2.2 of the Supplemental Draft EIS, included the following:

- **LRT Alignment:** The light rail alignment proposed within the Draft EIS within the Eden Prairie Segment extended east from a terminus just west of Mitchell Road, staying south of Highway 212 to the Southwest Station (cohabitated with the existing SouthWest Transit Center), and continuing east along Technology Drive to the intersection of Flying Cloud Drive and I-494.
- **LRT Stations:** The Draft EIS evaluated three proposed light rail stations in the Eden Prairie Segment, from west to east: (1) Mitchell Station, west of Mitchell Road and south of Highway 212, (2) Southwest Station, within the existing SouthWest Transit Center, and (3) Eden Prairie Town Center Station, on the south side of Technology Drive between Prairie Center and Flying Cloud drives.
- **LRT Park-and-ride Lots:** The Draft EIS proposed three park-and-ride lots within Eden Prairie: 400 surface and 400 structure spaces at Mitchell Station, 400 structured spaces at Southwest Station, and 650 structured spaces at Eden Prairie Town Center Station**.**

During the Draft EIS public comment period, the City of Eden Prairie asked the Council to investigate the feasibility of a more centrally located and walkable Eden Prairie Town Center Station that would provide better opportunities for transit-oriented development and redevelopment. The City noted that a station within walking distance of the Eden Prairie Center (a regional shopping mall) would help meet the City's long-term economic development goals and provide higher ridership due to its proximity to concentrations of existing and future employment and commercial activity centers. For similar reasons, the City also asked the Council to evaluate a location for the Mitchell Station that would be located south along Technology Drive, somewhere between Mitchell and Wallace Roads, additionally noting that this location for a park-and-ride lot may be better positioned to intercept automobile traffic coming from the west.

3.2 Design Adjustments Considered in the Eden Prairie Segment

Project staff developed a wide range of design adjustments to the LPA (see Table F.3-1 and F.3-2 and Exhibit F-2) intended to address comments received by the project from the City of Eden Prairie and others on the Draft EIS, and to help avoid or minimize adverse impacts, increase transit ridership and reduce project costs, while meeting the project's Purpose and Need (see Chapter 1 of the Supplemental Draft EIS).

TABLE F.3-1
Eden Prairie Segment – First- and Second-Step Adjustment Descriptions

First- and Second-Step Subsegment Adjustments	
Western Terminus to Prairie Center Dr.	
Draft EIS 3A	Mitchell Station would be on the west side of Mitchell Rd. and on the north side of the Eaton property. LRT alignment would follow the south side of Highway 212 east to Southwest Station.
5A	LRT alignment would be on the north side of Technology Dr. from Wallace Road to Mitchell Rd., turning south through private property bounded by Anderson Lakes Pkwy., Mitchell Rd., and Technology Dr., crossing Purgatory Creek on structure and passing between Flagship Corporate Center and Flagship Athletic Club facilities. Station on the north side of Anderson Lakes Pkwy. Could be aligned with a north-running or a center-running alignment adjustment on Singletree Ln., crossing Prairie Center Dr. on aerial structure.
8A	LRT alignment would be on the south side of Technology Drive from Wallace Road, crossing Purgatory Creek on the south side of Technology Dr. On south side of Technology Dr. adjacent to Purgatory Creek Park to Prairie Center Dr.
12A	LRT alignment would be on the north side of Technology Dr. from Wallace Rd. to future extension of Hiawatha St. then center-running along Technology Dr. to bus driveway at Southwest Station. At Purgatory Creek, the alignment would bridge over westbound Technology Dr. and remain on structure to cross the Southwest Station area just south of Southwest Transit Station parking garage. The structure would continue over to the east side of Prairie Center Dr. and connect to 21C.
18A	Same as 20A west of Purgatory Creek, turning south at Purgatory Creek (crossing on a structure) and passing between Flagship Corporate Center and Flagship Athletic Club facilities. Could be aligned with a north-running or center-running alignment on Singletree Ln., crossing Prairie Center Dr. on structure. Includes several station options along Technology Dr.
20A	Terminus station would be at Wallace Road. LRT alignment would run at-grade along north side of Technology Drive, switching to the south side of Technology Dr. at the west driveway at Eden Prairie City Center to the bus-only driveway at Southwest Station and cross Technology Dr. at-grade to Southwest Station.
23A	LRT alignment would be located on the north side of Technology Dr., from Wallace Rd. to future extension of Hiawatha St., and would turn north through privately owned commercial property to south side of Highway 212. The alignment would run along south side of Highway 212 to Southwest Station, similar to the Draft EIS.
26A	LRT alignment would be east-side-running along Wallace Rd. from Technology Dr. to Highway 212 and would turn east to follow the Draft EIS 3A alignment along south side to Highway 212 to Southwest Station.
Prairie Center Dr. between Southwest Station and Singletree Ln.	
2A	The alignment would be west-side-running along Prairie Center Dr., with an aerial crossing of Technology Dr. and crossing Prairie Center Drive near the Flagship Corporate Center to the bluff on the east side.
Draft EIS 3A	From Southwest Station, LRT alignment would follow the south side of Highway 212 eastbound off ramp and would cross under Prairie Center Dr. to south side of Technology Dr.
8A	LRT alignment would be west-side-running on Prairie Center Dr. (west) with either an at-grade or aerial crossing at Technology Dr. and either an at-grade or aerial crossing to the center of Singletree Ln. to connect to 24A.
8A1	Center-running LRT alignment along Prairie Center Dr. and center-running along Singletree Ln. (24A), to west-side-running along Prairie Center Dr. at new signal between Singletree Ln. and Technology Dr. At-grade crossing at Technology Dr.
21C	LRT alignment would be on the east side of Prairie Center Dr. (west) with either below-grade or aerial crossing at Technology Dr. continuing to the north side of Singletree Ln. (21C) or the center of Singletree Ln. (24A).
24A	LRT alignment would have an aerial crossing of Technology Dr. out of Southwest Station area, and be center-running on Prairie Center Dr. (west).
Prairie Center Dr. to I-494	
Draft EIS 3A	LRT alignment would follow the south side of Technology Dr. crossing several private driveways. The alignment would cross diagonally to north side of Technology Dr. at eastern access to Rosemount Emerson. The alignment would follow the north side of Technology Dr. to I-494 and would cross I-494 on an aerial structure.
1B	LRT alignment would cross Flying Cloud Dr. below-grade, and continue on the south side of West 78th St. and the center of Prairie Center Dr. (east). Would include a below-grade station option on east side of Flying Cloud Dr.

First- and Second-Step Subsegment Adjustments	
2A	Known as the "Comp Plan," the alignment would run between Costco and Bachman's on the bluff and between Rosemount Emerson and Brunswick Zone along Eden Rd., and would continue north along the west side of Flying Cloud Dr.
2A1	Alignment would be center-running or be on the north side of Singletree Ln. from Prairie Center Dr. (west) to an alignment following Glen Ln. Would include a connection into west-side-running on Flying Cloud Dr. north of Eden Rd.
2B	LRT alignment would follow alignment 2A between Prairie Center Dr. (west) and Flying Cloud Dr., crossing Flying Cloud Dr. at-grade and continuing along the south side of Leona Rd. and along the west side Prairie Center Dr. (east).
21C	LRT alignment on the north side of Singletree Ln., along west side of Flying Cloud Dr. Station on Singletree Ln. at Glen Ln.
24A	LRT alignment would be center-running along Singletree Ln. and either would cross to the north side at Eden Rd. intersection and would continue on the west side of Flying Cloud Dr. or continue across Flying Cloud Dr. to connect to 1B or 1A.
East of I-494	
Draft EIS 3A	From Technology Dr., LRT alignment would cross I-494, Flying Cloud Dr., and Viking Dr. on an aerial structure. To the north of Viking Dr., the alignment would follow the east side of Flying Cloud Dr. with at-grade crossing of Valley View Rd.
1A	From I-494, LRT alignment would run on the north side of Flying Cloud Dr. and would cross at-grade to south side at Viking Dr. Valley View Rd. crossing would be either at-grade or aerial.
1A2	From I-494, LRT alignment would run on the north side of Flying Cloud Dr. and would cross aerially at the intersection of Valley View Rd. and Flying Cloud Dr. to south side of Highway 212 entrance ramp.
1B	LRT alignment would be center-running along Prairie Center Dr. (east) and would cross Valley View Rd. at-grade at the intersection with Prairie Center Dr. (east) and Valley View Rd.
2B	LRT alignment would be on the west side Prairie Center Dr., crossing east at Viking Dr., crossing Valley View Rd. at-grade.
15A	LRT alignment would follow the I-494 ramp to eastbound Hwy 212 to the north of the Residence Inn and Hampton Inn along Hwy 212 right-of-way, crossing under the Valley View overpass of Highway 212 and beneath the ramps.

TABLE F.3-2
Eden Prairie Steps 1 and 2 Subsegments and Design Adjustments Considered

Subsegment[a]/Adjustment #	First Step	Second Step	Third Step Name (Supplemental Draft EIS Status)
Western Terminus to Prairie Center Drive			
3A	Retained	Dismissed	
12A	Dismissed		
5A	Dismissed		
20A	Retained	Retained	Technology Drive (retained)
18A	Dismissed		
8A	Dismissed		
23A	Retained	Retained	Highway 212 (dismissed)
26A	Retained	Dismissed	
Prairie Center Drive between Southwest Station and Singletree Lane			
3A	Retained	Dismissed	
24A	Retained	Retained	Singletree Lane[b] (dismissed)
21C	Dismissed		
2A	Retained	Retained	Comprehensive Plan[b] (retained)
8A	Retained	Dismissed	
8A1	Retained	Dismissed	
Prairie Center Drive to I-494			
3A	Retained	Dismissed	
2A	Retained	Retained	Comprehensive Plan[b] (retained)
21C	Dismissed		
24A	Retained	Retained	Singletree Lane[b] (dismissed)
1B	Dismissed		
2A1	Dismissed		

Subsegment[a]/Adjustment #	First Step	Second Step	Third Step Name (Supplemental Draft EIS Status)
2B	Dismissed		
East of I-494			
3A	Retained	Dismissed	
1A	Retained	Dismissed	
1A2	Retained	Retained	Retained
1B	Dismissed		
2B	Dismissed		
15A	Dismissed		

[a] The Steps 1 and 2 Western Terminus to Prairie Center Drive subsegment is equivalent to the Step 3 West subsegment. The other Steps 1 and 2 subsegments are equivalent to the Step 3 East subsegment.

[b] Steps 1 and 2 adjustments 2A and 24A in the Prairie Center Drive and Prairie Center Drive to I-494 subsegments were combined to form the Step 3 Comprehensive Plan and Singletree Lane alignment adjustments, respectively.

Source: The Council, January 2014. See Exhibit F-2 for an illustration of the design adjustments referenced in this table.

To meet those objectives, project staff implemented a three-step process for the Eden Prairie Segment to develop, evaluate, and receive stakeholder comment on a wide range of potential design adjustments to the LPA. Further, the stepwise process included a series of meetings with project staff, City of Eden Prairie and Hennepin County staff, and other stakeholders. The process also included presentations to and input from the TPAC, CAC, and BAC and presentations to and recommendations from the CMC (see Section 2.0 of this appendix for additional detail). In addition, the process included public meetings and open houses for the public to receive information and comment on the various design adjustments to the LPA under consideration. The results of the analysis within this three-step process, along with the committee recommendations and public comments received, informed the Council in April 2014 to identify the adjustments to this segment of the LPA that are evaluated further in the Supplemental Draft EIS.

3.2.1 First-Step Evaluation

In the first step of evaluating the alignment adjustment process, project staff developed, reviewed, and discussed a wide range of potential adjustments to the LPA with affected jurisdictions and the TPAC. The first step of evaluation divided the Eden Prairie Segment into four general subsegments, with each having between six and eight potential light rail alignment-related adjustments developed and evaluated (see Exhibit F-2 and Tables F.3-1 and F.3-2):[1]

- The western terminus to Prairie Center Drive (with eight potential adjustments)
- Prairie Center Drive between Southwest Station and Singletree Lane (with six potential adjustments)
- Prairie Center Drive to I-494 (with seven potential adjustments)
- East of I-494 (with six potential adjustments)

This range of design adjustments included consideration of an OMF site in part on the City of Eden Prairie's existing maintenance facility garage site, which is located along Technology Drive west of Mitchell Road. Some configurations of potential adjustments would have combined the OMF site in Eden Prairie with the Mitchell Station and park-and-ride lot.

During the first step of evaluation, the potential alignment adjustments were analyzed for possible impacts to right-of-way, automobile and truck traffic, on- and off-street parking supply, and wetlands and other environmental resources. This initial analysis focused on adjustments to the proposed light rail alignment, station locations, and park-and-ride lots. As a result of the first step of analysis, between three and five alignment adjustments within each subsegment advanced into the second step of the evaluation. Table F.3-3 provides a summary of the measures used to evaluate the potential first step of adjustments to the LPA. Table F.3-3 also notes which design adjustments were advanced into the second step for additional evaluation.

[1] Some potential design adjustments spanned two or more subsegments, while others were confined to one subsegment. The proposed light rail alignment and stations for the LPA as evaluated in LRT 3A and LRT 3A-1 of the Draft EIS were included and evaluated within each of the four subsegments and are accounted for within the number of adjustments in each subsegment.

EXHIBIT F-2
Step 1 and 2 Subsegments and Design Adjustments Considered - Eden Prairie Segment

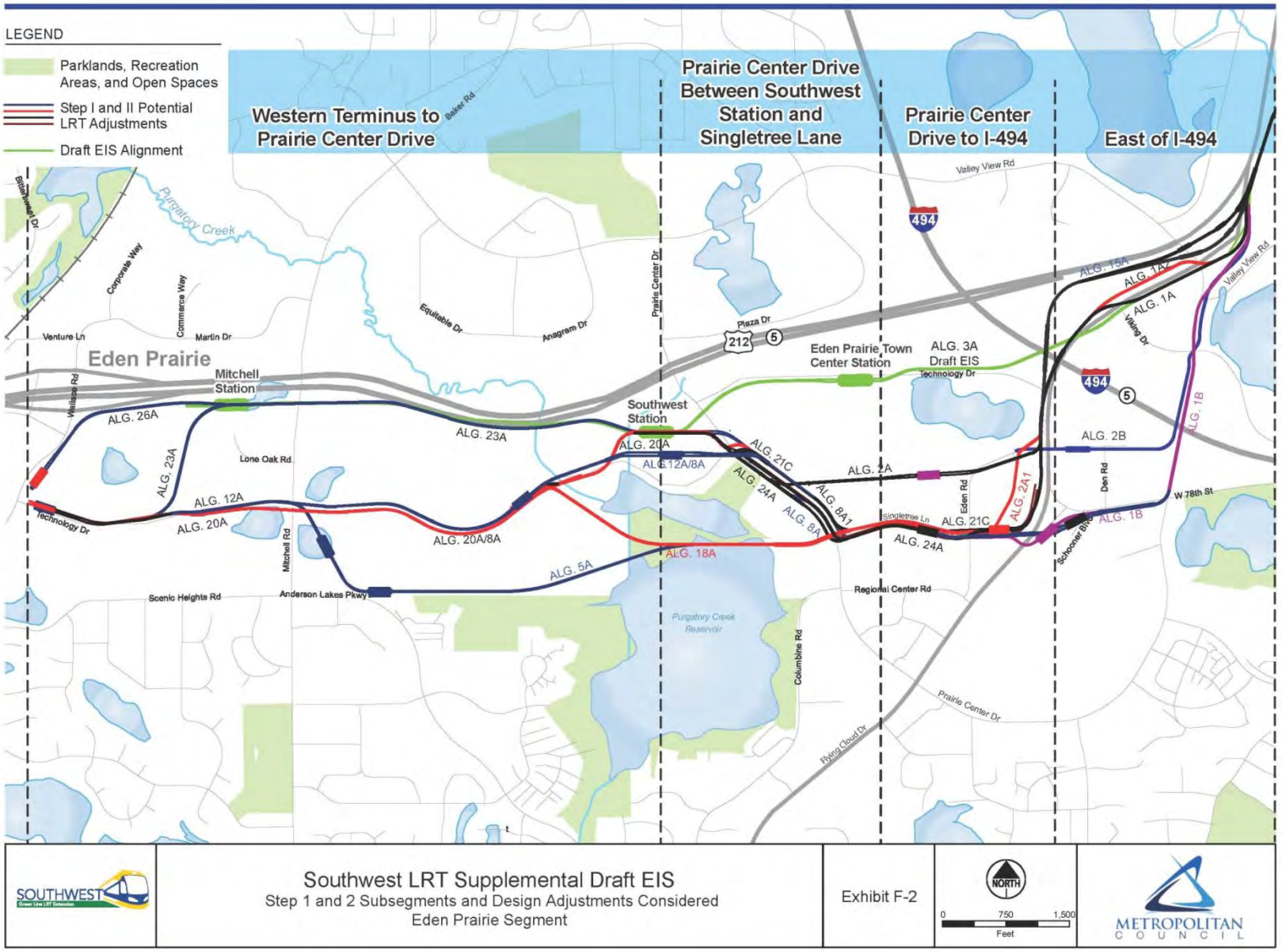


TABLE F.3-3
Eden Prairie Alignment Adjustment – First-Step Evaluation[2]

Subsegment	Status	Measures
Western Terminus to Prairie Center Dr.		
Draft EIS 3A	Retained	• EIS/LPA alignment carried into second-step evaluation without assessment in the first-step evaluation
5A	Dismissed	• Parking: Property owner south of Technology Dr. not supportive of station on their property or shared parking • Environmental: Environmental impacts and potential Section 4(f) impacts across Purgatory Creek • Station: Would eliminate Southwest Station and replace it with a station on the north side of Anderson Lakes Pkwy just east of Mitchell Road, away from a major activity center.
8A	Dismissed	• Right-of-Way: Access impacts along Technology Dr. • Traffic: Impacts at the Prairie Center Dr./Technology Dr. intersection, and undesirable track geometry • Environmental: Environmental impacts and potential Section 4(f) impacts across Purgatory Creek pond, Impacts on Purgatory Creek Recreational Area park • Station: Precluded having Southwest Station and moved the station to the west on Technology Dr.
12A	Dismissed	• Right-of-Way: — Property impacts on Southwest Station businesses and Southwest condos; disrupts functionality of the area — Required roadway widening on both sides of Technology Dr. — Deep excavation for removal and replacement of engineered fill (up to 45 feet) — Numerous utility relocations — Access impacts on Southwest Station condominiums • Environmental: Visual impacts on Southwest Station condominiums and Purgatory Creek Park due to elevated LRT alignment in Southwest Station area
18A	Dismissed	• Right-of-Way: Requires closing the Bachman's/Watertower Apartments shared driveway • Environmental: impacts and potential Section 4(f) impacts across Purgatory Creek • Station: — Moves Southwest Station west on Technology Dr. — Property owner south of Technology Dr. not supportive of station on their property or shared parking — St. Andrews Church not supportive of a station and park-and-ride facility near its building
20A	Retained	• Right-of-Way: Fewer access impacts on Southwest Station condominiums than 12A • Traffic: Less roadway reconstruction along Technology Dr. than center-running (12A) • Environmental: Less visual impact on Southwest Station condominiums than 12A due to being at-grade through most of the Southwest Station area
23A	Retained	• Station: Achieves City desire for station with improved access to Hwy 212 west based on Draft EIS alignment
26A	Retained	• Right-of-Way: — Impacted property owner prefers this option over 23A — Requires removal of one building on private property • Station: Achieves City desire for station with improved access to Hwy 212 west based on Draft EIS alignment
Prairie Center Dr. between Southwest Station and Singletree Ln.		
Draft EIS 3A	Retained	• EIS/LPA alignment carried into second-step evaluation without assessment in the first-step evaluation
2A	Retained	• Traffic: Minimum traffic impacts
8A	Retained	• Traffic: Potential routing option to get to the west side of Prairie Center Dr. and to limit need for grade-separated crossing
8A1	Retained	• Traffic: Potential routing option to get to the west side of Prairie Center Dr. and to limit need for grade-separated crossing

[2] Throughout this appendix, "dismissed" means that a design adjustment was removed from further study at that time; "retained" means that a design adjustment was advanced into the next step of analysis for further study. Source for all tables is (Council, 2013/14), unless noted.

Subsegment	Status	Measures
21C	Dismissed	• Right-of-Way: Property impacts related to driveway impacts on the north side of Prairie Center Dr. • Traffic: — Undesirable intersection and track configuration connecting to center-running on Singletree Ln. — Traffic impacts and LRT signal delay at the Prairie Center Dr./Technology Dr. intersection
24A	Retained	• Traffic: Minimum traffic impacts • Other: Requires partial reconstruction of Prairie Center Dr. (west)
Prairie Center Dr. to I-494		
Draft EIS 3A	Retained	• EIS/LPA alignment carried into second-step evaluation without assessment in the first-step evaluation
1B	Dismissed	• Right-of-Way: Property impacts • Traffic: — Substantially higher LRT signal delays due to traffic and traffic signals on Prairie Center Dr. (east) — Traffic impacts along Prairie Center Dr. • Station: — Below-grade station — Eden Prairie Center owner not supportive of station on its property and sharing parking
2A	Retained	• Traffic: Minimum traffic impacts • Other: Alignment as shown in City of Eden Prairie's adopted Comprehensive Plan
2A1	Dismissed	• Right-of-Way: — Glen Lane-only access for businesses along Flying Cloud Dr. — Insufficient right-of-way on Glen Lane for LRT, roadway, and pedestrian facilities • Station: Limits station location options to just in front of Brunswick
2B	Dismissed	• Right-of-Way: Property impacts • Traffic: — Substantially higher LRT signal delays from traffic and signals on Flying Cloud/Prairie Center Dr. — Impacts on traffic crossing Flying Cloud Dr. and along Prairie Center Dr.
21C	Dismissed	• Right-of-Way: Access questions raised by Bachman's can be mitigated with full access from Prairie Center Dr. (west), but access concerns of the shared access with Watertower Apartments cannot be mitigated • Other: — Maintains existing cross section of Singletree Ln. compared to 24A — Less compatible with Eden Prairie's City Center walkability goals
24A	Retained	• Other: — More compatible with City's walkability goals than 21C; reduced cross section for Singletree Ln. — Requires realignment of Glen Lane
East of I-494		
Draft EIS 3A	Retained	• EIS/LPA alignment carried into second-step evaluation without assessment in the first-step evaluation
1A	Retained	• Traffic: North side of Flying Cloud Dr. has fewer impacts on utilities and traffic • Other: More favorable crossing of I-494 than Draft EIS alignment (shorter bridge)
1A2	Retained	• Traffic: — North side of Flying Cloud Dr. has fewer impacts on utilities and traffic — Fewer traffic impacts than 1A — Fewer LRT signal delays than 1A • Other: More favorable crossing of I-494 than Draft EIS alignment (shorter bridge)
1B	Dismissed	• Right-of-Way: Property impacts • Traffic: — Substantially higher LRT signal delays due to traffic and traffic signals on Prairie Center Dr. (east) — Traffic impacts along Prairie Center Dr. • Environmental: Vibration impact concerns at Fox 9 Television

Subsegment	Status	Measures
2B	Dismissed	• Right-of-Way: Property impacts • Traffic: — Substantially higher LRT signal delays due to traffic and traffic signals on Prairie Center Dr. (east) — Traffic impacts along Prairie Center Dr. • Other: Need to lengthen the existing I-494 bridges over Prairie Center Dr. (east)
15A	Dismissed	• Traffic: Traffic impacts on the Valley View Rd. and Hwy 212 interchange during construction • Other: — Need to lengthen the existing Valley View Rd. Bridge — Extensive retaining walls needed along Highway 212

3.2.2 Second-Step Evaluation

The second step of evaluating alignment adjustments in the Eden Prairie Segment included an in-depth traffic investigation, an assessment of property acquisitions and on- and off-street parking displacements, and input from local businesses and the public. Based on the second step of analysis and evaluation, the project team identified four proposed alignment adjustments in the Eden Prairie Segment to be further considered in the third step of evaluation. Table F.3-4 provides a summary of the measures used to evaluate the potential second-step adjustments to the LPA. Table F.3-4 also notes the four design adjustments that were advanced into the third step for additional evaluation.

TABLE F.3-4
Eden Prairie Alignment Adjustment – Second-Step Evaluation

Subsegment	Status	Measures
Western Terminus to Prairie Center Dr.		
Draft EIS 3A	Dismissed	• Environmental: Noise, vibration, and visual concerns at Southwest Station condominiums • Right-of-Way: Impacts on private property (right-of-way acquisition) • Traffic: Mitchell Station difficult to access from west where most park-and-ride (P&R) trips would originate • Other: Modifications required to the Highway 5/212 ramps at Mitchell Rd. • Local Input: 20A preferred by stakeholders through committee process
20A	Retained	• Environmental: — Fewer impacts on Southwest Station condos (noise, vibration, right-of-way) than 23A/26A — Potential floodplain concerns • Local Input: Achieves City of Eden Prairie desire for a station with improved access to Highway 212 west • Traffic: LRT travel times and ridership not substantially different from other alternative segments
23A	Retained	• Environmental: • Noise, vibration, and visual concerns to Southwest Station condominiums • Right-of-Way: Impacts on private property (bisects Eaton Property) • Other Modifications required to the Highway 5/212 ramps at Mitchell Rd. • Local Input: 20A preferred by stakeholders through committee process
26A	Dismissed	• Local Input: Achieves City desire for centralized station with improved access to Highway 212 west • Right-of-Way: Requires removal of one building on private property
Prairie Center Dr. Between Southwest Station and Singletree Ln.		
Draft EIS 3A	Dismissed	• Local Input: — Located beyond the core of the Eden Prairie City Center area — Does not adequately serve City-identified areas of potential growth • Other: — Limited transit-oriented development opportunities — Generates least number of LRT-projected riders — Limited pedestrian connectivity to Eden Prairie Center — Conflicts with power transmission lines — Substantial construction impacts due to tunnel construction

Subsegment	Status	Measures
2A	Retained	• Traffic: Minimal traffic impacts • Other: LRT travel times and ridership not substantially different from other alternative segments • Right-of-Way: Fewer property and roadway impacts than 24A • Local Input: 2A preferred by stakeholders and public through committee process
8A	Dismissed	• Traffic: Traffic/LRT delay crossing Singletree Ln./Prairie Center Dr. intersection at-grade • Other: Dismissed in favor of center-running on Prairie Center Dr. (8A1) • Right-of-Way: Driveway impacts on Flagship Athletic Club
8A1	Dismissed	• Other: Requires partial reconstruction of Prairie Center Dr. (west) • Traffic: Substantial traffic impacts on Prairie Center Dr. at Singletree Ln. and Technology Dr.
24A	Retained	• Traffic: More temporary/construction traffic impacts than 2A; reconstruction of Prairie Center Dr. • Right-of-Way: More property impacts than 2A • Other: Below-grade separation at Technology Dr., concerns about high groundwater level • Local Input: 2A preferred by stakeholders and public through committee process
Prairie Center Dr. to I-494		
Draft EIS 3A	Dismissed	• Local Input: — Located beyond the core of the Eden Prairie City Center area — Does not adequately serve City-identified areas of potential growth • Other: — Limited transit-oriented development opportunities — Generates least number of LRT projected riders — Limited pedestrian connectivity to Eden Prairie Center — Conflicts with power transmission lines — Construction impacts due to tunnel construction
2A	Retained	• Traffic: Minimum traffic impacts • Right-of-Way: Fewer property and roadway impacts than 24A • Other: — Compatible with Eden Prairie's City Center walkability goals — LRT travel times and ridership not substantially different from other alternative segments • Local Input: 2A preferred by stakeholders and public through committee process
24A	Retained	• Local Input: — More compatible with Eden Prairie's City Center walkability goals than 2A but requires a reduced cross section of Singletree Ln. — 2A preferred by stakeholders and public through committee process • Right-of-Way: — Access concerns to businesses during construction — Requires higher number of property impacts than 2A • Other: Requires reconstruction of Singletree Ln.
Draft EIS 3A	Dismissed	• Environment: — Substantial structure over I-494 and Flying Cloud Dr. — Aerial structure has high visual impact on businesses — Conflicts with power transmission lines • Traffic: — More traffic impacts at Valley View Rd. than 1A2 • More LRT signal delay at Valley View Rd. than 1A2
1A	Dismissed	• Traffic: — More traffic impacts than 1A2 — More LRT signal delay than 1A2 • Environment: Aerial structure has high visual impact on businesses
1A2	Retained	• Traffic: — Fewer traffic impacts than 1A — Fewer LRT signal delay than 1A • Other: — Aerial structure has fewer visual impacts — LRT ridership not substantially different from other alternative segments • Environment: Noise and vibration concerns to existing businesses (Residence Inn and other hotels)

3.2.3 Third-Step Evaluation

For the third-step evaluation, the Eden Prairie Segment was divided into two subsegments that were different than the subsegments used in the first two steps: West (west of the existing SouthWest Transit Center) and East (east of the existing SouthWest Transit Center) (see Exhibit F-3). Two potential alignment adjustments were evaluated in each of the two subsegments. Either West alignment could be paired with either East adjustment (resulting in four possible combinations): Technology Drive and Highway 212 alignment adjustments in the West subsegment and the Singletree Lane and Comprehensive Plan alignments in the East subsegment, shown on Exhibit F-3. Each alignment adjustment had two or more variations, addressing possible station locations, roadway treatments, park-and-ride lot locations, and accommodation of an OMF. None of the third-step alignment adjustments were evaluated in the Draft EIS, although the proposed location of the Southwest Station would be in a similar location as proposed in the Draft EIS and in the third-step evaluation of design adjustments. The third-step evaluation addressed a range of measures related to cost, transit travel times and ridership, wetland, floodplain, existing land use near proposed station areas, and various other measures (see Table F.3-5).

3.2.4 Conclusion

Table F.3-5 provides a summary of the criteria and measures used to evaluate the potential third step of adjustments to the LPA. Based on the analysis documented in this appendix and through the agency coordination and public involvement process described in this appendix, in April 2014 the Council identified the following adjustments to be incorporated into the LPA:

- Combined with both the Comprehensive Plan and Singletree Lane alignments. Retaining the Technology Drive alignment in the West subsegment, which moves the western terminus station from immediately south of Highway 212 west of Mitchell Road to immediately south of Technology Drive west of Mitchell Road
- Retain the Comprehensive Plan alignment adjustment in the East subsegment and dismissing the Singletree Lane alignment adjustment

In summary, in the West subsegment, the Technology Drive alignment would provide better placement of the Mitchell Station relative to existing and planned development. In the East subsegment, relative to the Singletree alignment, the Comprehensive Plan alignment adjustment would result in fewer potential traffic conflicts and fewer property acquisitions and business displacements.

The LPA, as evaluated in the Supplemental Draft EIS, reflects the inclusion of the project's western terminus at Mitchell Station by way of Technology Drive and the Comprehensive Plan alignment (see Exhibit F-3). Other potential design adjustments developed and evaluated in this section were removed from further study.

4.0 Potential Operations and Maintenance Facility Sites

This section provides a summary of the range of potential OMF sites that were developed and evaluated after publication of the Draft EIS. This section first provides background information on OMF sites that were addressed for the Draft EIS and provides a description of the wide range of OMF sites considered after the Draft EIS and how those potential OMF sites were evaluated. The *Draft Operations and Maintenance Facility Site Selection TI # 23* (AECOM/Kimley-Horn and Associates, 2013) provides additional detail on the evaluation of OMF sites that occurred following the Draft EIS.

4.1 Background

As noted in the Draft EIS, the light rail alternatives would need an OMF for light vehicle maintenance, running repairs for the light rail vehicles, and storage of vehicles not in service. In general, light rail vehicles would be cleaned and repaired daily inside and outside and the vehicles would be inspected and serviced to ensure operational safety and reliability. Features and functions needed at the OMF are identified in Section 2.3.3.9 of the Draft EIS. The OMF would be designed and configured to store 30 light rail vehicles, sufficient to support Southwest LRT operations through 2030. Positioning an OMF in an efficient location along the proposed rail line is important in minimizing nonrevenue mileage traveled by trains, providing operator access, and providing for adjustments to train lengths during different periods of the day.

EXHIBIT F-3
Third Step LRT Alignment Adjustments Evaluated in the Supplemental Draft EIS - Eden Prairie Segment

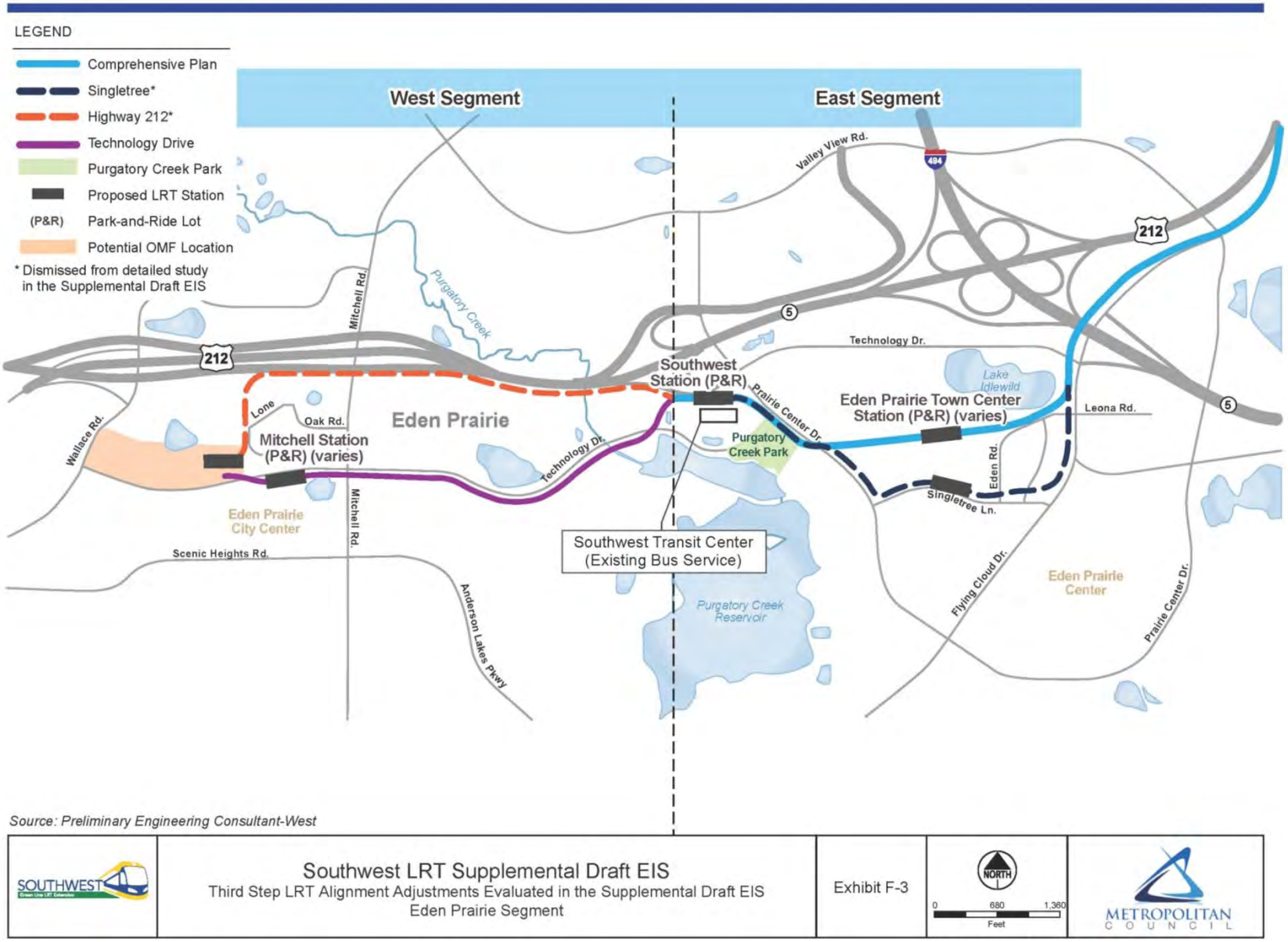


TABLE F.3-5
Eden Prairie Alignment Adjustment – Third-Step Evaluation

Criteria/Measures	Draft EIS[a]	OPTION 1	OPTION 2	OPTION 3	OPTION 4
	Draft EIS LPA - Mitchell Rd. Station Terminal	Technology Dr./ Singletree Ln.	Highway 212/ Singletree Ln.	Technology Dr./ Comprehensive Plan	Highway 212/ Comprehensive Plan
Alignment Description[b]	Draft EIS 3A	20A-24A-1A2	23A-24A-1A2	20A-2A-1A2	23A-2A-1A2
Western Terminus Station	Mitchell Rd.	Wallace Rd.	Wallace Rd.	Mitchell Road at City Center[c]	Wallace Rd.
Capital Cost and Key Capital Cost Drivers					
Capital Cost (millions)[d]	$234.9	$276.8	$274.9	$270.4	$286.4
Total Park and Ride Spaces in Segment	1,450 structured 400 surface	950 structured 160 surface	950 structured 160 surface	1380 structured 160 surface	950 structured 160 surface
Mitchell Station	800 spaces (400 structured 400 surface)	950 structured	950 structured	900 structured	950 structured
Southwest Station	1,325 structured[a] (924 existing) (400 ramp)	924 structured (existing; bus + LRT); assumes sharing of existing ramp by SouthWest Transit and Southwest LRT	924 structured (existing; bus + LRT); assumes sharing of existing ramp by SouthWest Transit and Southwest LRT	480 new structured; 440 for LRT demand and 40 to replace existing impacted spaces	924 structured (existing; bus + LRT); assumes sharing of existing ramp by SouthWest Transit and Southwest LRT
Eden Prairie Town Center Station	650 structured	160 surface	160 surface	160 surface	160 surface
Right-of-way Impacts[e]	1 full 13 partial	2 full 28 partial	2 full 27 partial	2 full 20 partial	2 full 21 partial
Substantial Utility Impacts	Overhead high-voltage utilities near Town Center Station (east-west and north-south direction); immediately adjacent to Eden Prairie water treatment plant	None	Immediately adjacent to Eden Prairie water treatment plant	Water mains, sewer and gas mains run parallel to, beneath, or cross alignment	Immediately adjacent to Eden Prairie water treatment plant
Transit Travel Time Differences					
Number of Signalized Intersections LRT Runs Through (existing and new)	3	11	9	7	6
Change in LRT Travel Time from Draft EIS LPA (minutes)[f]	0.0	4.9 minutes	4.8 minutes	3.4 minutes	3.8 minutes
LRT Length (miles) - from 1,000 Feet East of Valley View	2.6 miles	3.3 miles	3.5 miles	2.8 miles	3.3 miles
Transit Ridership Differences					
Change in Daily Ridership (2030) from Draft EIS LPA	0	410	410	410	410
Change in Transit Dependent Riders (Year 2030) from Draft EIS LPA	0	90	90	90	90

Criteria/Measures	Draft EIS[a]	OPTION 1	OPTION 2	OPTION 3	OPTION 4
	Draft EIS LPA - Mitchell Rd. Station Terminal	Technology Dr./ Singletree Ln.	Highway 212/ Singletree Ln.	Technology Dr./ Comprehensive Plan	Highway 212/ Comprehensive Plan
Environmental Considerations					
Potential Wetland Impacts[g]	+0.7 acres	+2.2 acres	+0.7 acres	+2.2 acres	+0.7 acres
Potential FEMA Floodplain Impacts	0 cubic yards	60 – 2000 cubic yards	0 cubic yards	60 – 2000 cubic yards	0 cubic yards
Other Factors					
Construction Impacts	PCD/Technology Dr. intersection/tunnel, Technology Dr. businesses	Singletree Ln. businesses, Flying Cloud Dr.	Singletree Ln. businesses, Flying Cloud Dr.	Eden Rd. businesses, Flying Cloud Dr.	Eden Rd. businesses, Flying Cloud Dr.
Traffic Impacts (Year 2030) (Unmitigated)	Flying Cloud Dr./Valley View	Technology Dr./ Flying Cloud Dr.	Technology Dr./ Flying Cloud Dr.	Technology Dr./ Flying Cloud Dr.	Technology Dr./ Flying Cloud Dr.
Intersections at Level of Service E/F due to LRT (without mitigation)		Mitchell Rd./ Technology Dr.	Mitchell/TH 5 ramps	Mitchell Rd./ Technology Dr.	Mitchell Rd./ Technology Dr. Mitchell/TH 5 ramps
Walkability at Eden Prairie City Center Station	Poor	Very Good	Very Good	Good	Good
Existing Land Use – Within 0.5 Mile of Eden Prairie City Center Station					
Population	697	1467	1,467	1,350	1,350
Housing Units	474	887	887	841	841
Employment	4,422	7,551	7,551	6,195	6,195
Existing Land Use – Within 0.5 Mile of Mitchell Station					
Population	279	606	606	606	606
Housing Units	132	221	221	221	221
Employment	2,442	2,124	2,124	2,124	2,124
Status	**Dismissed**	**Dismissed**	**Dismissed**	**Retained**	**Dismissed**

[a] Dismissed from further study in the second step; characteristics are provided for comparison only.

[b] Options represent combinations of light rail alignments and stations illustrated on Exhibit F-2.

[c] Also evaluated with a Wallace Road terminus.

[d] Capital costs are expressed in year-of-expenditure dollars and include allocated and unallocated contingencies and design costs.

[e] Does not include displacements due to improvements to Mitchell Road.

[f] The traffic analysis in the Draft EIS was based on proposed light rail preemption at traffic signals, which would result in no delay for light rail vehicles, but that could lead to unacceptable levels of service at some local roadway intersections preempted by light rail. In the current analysis, the LRT delay will vary by treatment at each affected intersection.

[g] Based on initial assessment, refined at a later date.

The following OMF site characteristics were used in the Draft EIS evaluation (see Appendix H of the Draft EIS):

- Approximately 10- to 15-acre site to store at least 30 light rail vehicles through 2030, with the ability to expand to accommodate up to 36 vehicles, and to conduct maintenance activities
- Rectangular shape, generally three times longer than wide
- Ability to move trains into and out of both ends of the facility
- Adjacent to a straight and relatively flat section (a grade equal to or less than 1 percent) of mainline track to accommodate turnouts and crossovers

- Good roadway access for equipment and employees

In addition, the Draft EIS identified the following preferred characteristics of an OMF:

- Compatibility with adjacent current and planned land uses
- Land zoned industrial, light industrial, or both
- Undeveloped property to minimize acquisition and relocation costs
- Public land
- Preferred location near one end of line to minimize deadheading of empty vehicles

The Draft EIS identified 14 sites that satisfied the project's requirements for an OMF. Of those 14 sites, four were carried forward into the Draft EIS for more detailed study. Appendix H (Part 1) of the Draft EIS summarizes the evaluation of the 14 OMF sites and the identification of four sites for inclusion in the Draft EIS. Section 2.3.3.9 of the Draft EIS contains brief descriptions of the four sites evaluated; these sites are numbered west to east in the Supplemental Draft EIS: EP-1, EP-2, EP-3, and M-4. The locations of these four potential sites are illustrated on Exhibit F-4. The Draft EIS did not identify a preferred OMF site.

4.2 Operations and Maintenance Facility Sites Considered after Publication of the Draft Environmental Impact Statement

Following publication of the Draft EIS, the Council determined that selecting the proposed project's OMF site—one that accommodates its functional and spatial needs and is compatible with surrounding uses—would require additional site identification and evaluation to build upon and complement the studies conducted during the Draft EIS phase.

The project team used a four-step process to identify and evaluate the expanded range of OMF sites. The process entailed the following steps of development and evaluation:

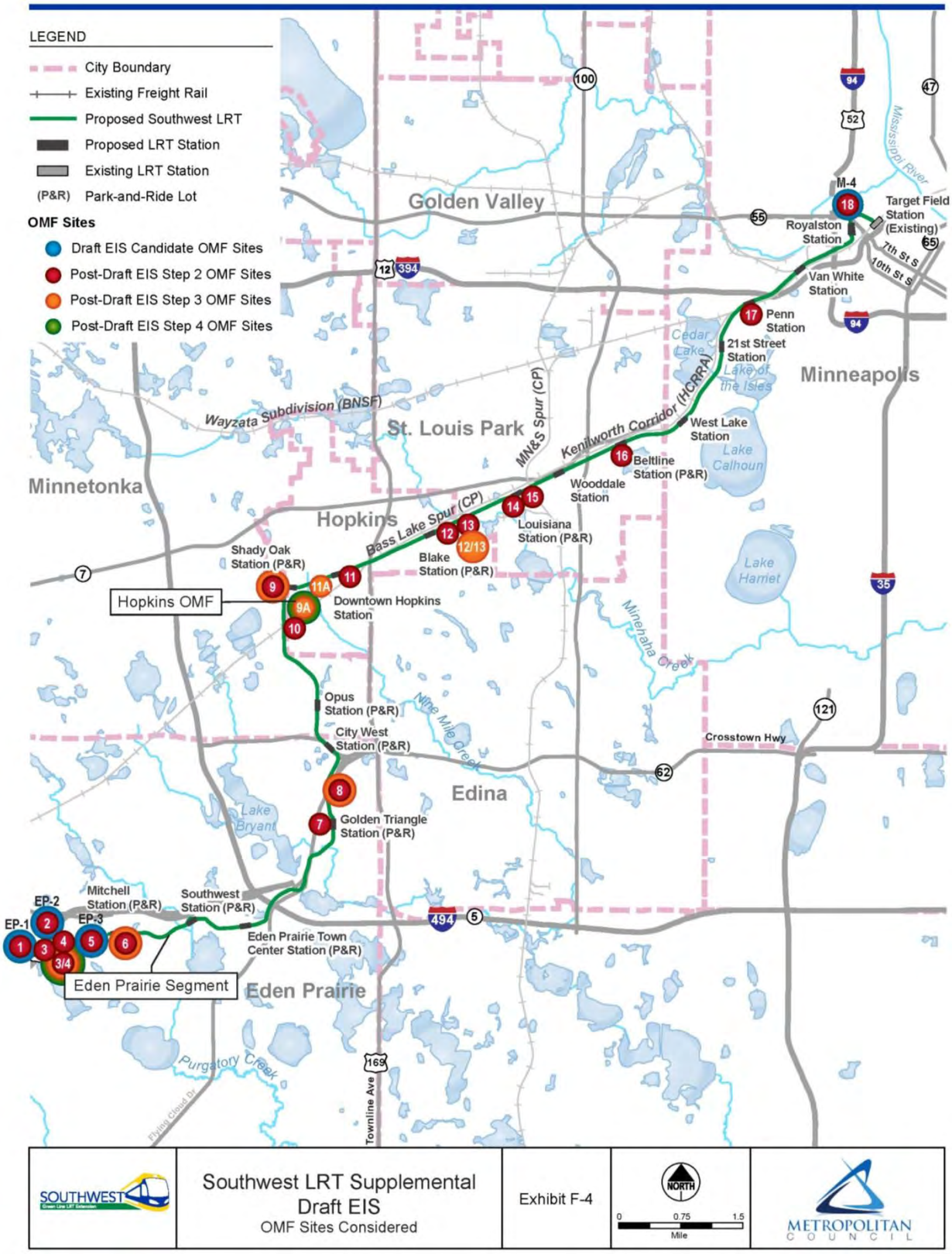
- **First-Step Evaluation.** A preliminary site evaluation, narrowing potential sites from approximately 30 to 18.
- **Second-Step Evaluation.** A detailed assessment based on 13 criteria, narrowing from 18 to seven OMF sites.
- **Third-Step Evaluation.** An operational analysis and public and jurisdiction review and input, narrowing from seven to two sites.
- **Fourth-Step Evaluation.** A detailed assessment and public and jurisdictional review of two sites.

Throughout the OMF development and evaluation process, the project team coordinated with the project's business, community, and technical committees and with the general public to obtain a wide range of stakeholder views on the OMF sites (see Section 2.0 of this appendix for additional detail). Exhibit F-4 illustrates the potential OMF sites evaluated through this four-step process.

4.2.1 First-Step Evaluation

As the first step in expanding upon the OMF site search conducted for the Draft EIS, the project team conducted a preliminary site identification process. Within that process, project staff reviewed aerial photographs to understand land use patterns, parcels, the physical context, and potential environmental concerns for parcels adjacent to the proposed light rail alignments. This desktop analysis was followed by field surveys to examine candidate locations based upon parcel proximity to the proposed light rail alignment and available parcel size. As a result of this analysis, the project team identified approximately 30 first-step sites that warranted more detailed review and evaluation, including the four sites evaluated in the Draft EIS.

EXHIBIT F-4
OMF Sites Considered



Concurrent with the preliminary site identification process, the project team worked with Metro Transit rail operations staff to develop a Space Needs Program for the OMFs. The Space Needs Program, which established the approximate size of the OMF building needed to accommodate its major functions (rail operations, materials management, rail maintenance, and facilities maintenance), served as the foundation for the project team to develop the initial site selection criteria. The criteria used during the first-step evaluation were similar to those used for the Draft EIS, as follows:

- Site of 10 to 15 acres
- Regular geometric parcel shape and flat
- Efficient light rail train movement to and from the site
- Good roadway access to the site
- Compatible with adjacent land use

The first step of evaluation resulted in identification of 18 candidate sites to be developed and evaluated further in the second step, which included portions of the sites studied in the Draft EIS. The first-step sites are numbered sequentially west to east, as sites 1 to 18, and their general locations are illustrated on Exhibit F-4. Site EP-1 became site 1; a portion of EP-2 is included in site 2; a portion of EP-3 became site 5; and M-4 became site 18. The measures used to evaluate the first-step OMF sites are summarized in Table F.4-1. The process used to identify the 18 sites and the evaluation criteria were shared with the TPAC, CAC, BAC, CMC, and Metro Transit operations and maintenance staff for their review and input.

TABLE F.4-1
Operations and Maintenance Facility Site Selection – First-Step Evaluation Criteria

Category	Criteria
Site Size	Site needed to have 10 to 15 acres available for development
Site Shape and Terrain	Site needed to have a regular geometric shape (rectangular) and relatively flat terrain
Connection to LRT Alignment	Site had to provide efficient light rail train movement to/from the OMF site to LRT alignment
Local Roadway Access	Site had to have access to the local roadway network
Land Use Compatibility	Site had to be compatible with adjacent land use

4.2.2 Second-Step Evaluation

To further evaluate the 18 second-step candidate sites, more detailed evaluation criteria were developed addressing four operational characteristics and nine site characteristics, listed in Table F.4-2. As part of the second step of evaluation, the project team visited each site; reviewed community comprehensive plans, zoning codes, and county property records; and obtained information about onsite soils and subsurface conditions. Based on this research, the project team and Metro Transit staff used the criteria to qualitatively rate the second-step candidate sites. The evaluation of the sites was reviewed with corridor jurisdictions through the TPAC, CAC, BAC, and CMC.

Initially, the 18 second-step sites were narrowed to seven sites based on the 13 criteria and evaluation measures included in Table F.4-2. Members of the project team met with staff from the Cities of Eden Prairie, Minnetonka, Hopkins, and St. Louis Park to discuss the OMF evaluation process and the seven most highly rated sites.

TABLE F.4-2
Operations and Maintenance Facility Site Selection – Second-Step Evaluation

Table Key: E = Excellent, VG = Very Good, G = Good, M = Marginal, U = Unacceptable — OMF Site #	Screening Criteria: Operational Characteristics: Site Configuration	Operational Characteristics: Alignment Proximity/Connectivity	Operational Characteristics: Alignment Location	Operational Characteristics: Site Access	Site Characteristics: Neighborhood Compatibility	Site Characteristics: TOD/Economic Development Impact	Site Characteristics: Zoning/Land Use	Site Characteristics: Site and Facilities Cost	Site Characteristics: Real Estate Acquisition	Site Characteristics: Relocation Cost	Site Characteristics: Environmental Impact	Site Characteristics: Cultural Resources	Site Characteristics: Stormwater Management	Status
1 Eden Prairie – Hwy 212 ROW	G	U	M	G	E	VG	G	U	VG	E	G	E	M	Dismissed
2 Eden Prairie – Wallace Rd	G	VG	M	VG	M	G	U	G	M	U	E	E	E	Dismissed
3 Eden Prairie – City Garage W	E	E	G	E	VG	VG	E	VG	G	G	E	E	VG	Retained[a]
4 Eden Prairie – City Garage E	E	E	G	E	VG	VG	E	VG	VG	VG	M	E	G	Retained[a]
5 Eden Prairie – Mitchell West	M	VG	G	M	G	VG	E	M	G	VG	M	E	M	Dismissed
6 Eden Prairie – Mitchell East	E	E	G	E	G	M	VG	VG	G	E	G	E	E	Retained
7 Eden Prairie – Flying Cloud/West 70th St	E	E	G	E	VG	VG	G	G	M	M	M	E	VG	Dismissed
8 Eden Prairie – Shady Oak/West 70th St	E	E	VG	E	E	VG	VG	VG	G	VG	VG	E	E	Retained
9 Minnetonka – K-Tel	E	E	E	E	E	G	VG	VG	VG	G	VG	E	E	Retained
9A Minnetonka – K-Tel East	VG	VG	E	VG	E	G	E	G	VG	G	VG	E	E	Retained
10 Hopkins – 7th St	E	VG	E	VG	VG	E	M	M	M	E	M	E	E	Dismissed
11 Hopkins – 11th Ave	G	E	E	E	VG	M	G	G	G	G	VG	E	E	Dismissed
11A Hopkins – K-Tel at 11th Ave	E	E	E	E	E	G	E	M	VG	G	E	VG	VG	Retained
12 Hopkins – Excelsior West	E	E	VG	E	VG	VG	VG	VG	VG	G	VG	E	E	Retained[a]
13 Hopkins/St. Louis Park – Excelsior East	E	VG	VG	E	E	E	VG	VG	VG	G	VG	E	E	Retained[a]
14 St. Louis Park – Louisiana West	VG	VG	VG	E	E	M	VG	VG	G	G	G	E	VG	Dismissed
15 St. Louis Park – Louisiana East	VG	G	VG	E	E	M	VG	VG	G	G	VG	E	VG	Dismissed
16 St. Louis Park – Beltline	U	U	G	E	E	U	VG	VG	VG	G	E	E	VG	Dismissed
17 Minneapolis – Penn	E	G	M	U	M	M	M	VG	E	E	U	M	E	Dismissed
18 Minneapolis –5th St North	U	U	M	E	VG	U	M	VG	VG	VG	M	M	G	Dismissed

[a] Combined in third-step evaluation.

Acronym: TOD = transit-oriented development.

In April 2013, the seven OMF sites were presented to TPAC, which includes the staff from cities along the proposed light rail alignment. TPAC representatives from Hopkins and Minnetonka requested the project team evaluate two additional OMF sites that were not previously evaluated: 9A and 11A, both in Hopkins, bringing the number of OMF sites under consideration to nine. The project team evaluated the two sites proposed using the criteria outlined in Table F.4-3, and both sites ranked as high as the seven other remaining sites. Based upon more detailed analysis, the project team then combined sites 3 and 4, as well as sites 12 and 13, to better meet OMF spatial requirements and to provide more area for buffering at the edges of the site, bringing the number of sites back to seven.

4.2.3 Third-Step Evaluation

The project team prepared conceptual layout plans for each of the seven third-step OMF sites listed in Table F.4-3. The conceptual plans also examined the relationship to adjacent edges, setbacks, environmentally sensitive areas, and remnant space within the OMF site available for redevelopment.

The project team presented the seven OMF sites at three public open houses on May 13 (Eden Prairie), May 15 (St. Louis Park), and May 22, 2013 (Hopkins/Minnetonka).

Within the third step of evaluation, the project team analyzed the operational performance of the seven remaining OMF sites in greater detail based on conceptual site layouts, compliance with current land use planning and zoning, preliminary costing, and a preliminary assessment of potential environmental impacts. Based on the evaluation of the seven third-step sites (Table F.4-3) and on public and committee input discussed in Section 2.0 of this appendix, the project team identified OMF sites 3/4 (Eden Prairie) and 9A (Hopkins) for further detailed consideration. In summary, these two potential OMF sites had the least conflict with either existing or adjacent land uses and planned development. A few sites were eliminated due to environmental factors, limitations in operations, and higher costs of construction elements. Still other sites posed potential conflict with transit-oriented development due to existing land uses adjacent to proposed light rail stations.

4.2.4 Fourth-Step Evaluation

The project's fourth step of evaluation of potential OMF sites focused on two potential sites: Site 3/4 in Eden Prairie and Site 9A in Hopkins (see Table F.4-4).

A. Eden Prairie Site 3/4

The Eden Prairie 3/4 site is an approximately 20-acre parcel between Technology Drive on the south, Highway 5 on the north, Mitchell Road on the east, and Wallace Road to the west (see Exhibit F-5). Wallace Road and Mitchell Road would provide regional access from Highway 5. The proposed OMF site would be comprised of four parcels. On the east half of the site, a large wetland abuts a building owned by the Eaton Corporation. The west half of the site includes the city's maintenance facility, and the northeast quadrant at the intersection of Wallace Road and Technology is leased by Metro Machine & Engineering. The project team considered three conceptual site layouts for the Eden Prairie OMF, because two light rail alignment adjustments and three different access possibilities were also under consideration in the Eden Prairie Segment. Exhibits F-5 to F-7 illustrate the three conceptual site layouts for the Eden Prairie OMF.

B. Hopkins Site 9A

The Hopkins 9A site is an approximately 15-acre parcel between the CP Railroad on the south, 5th Street South (K-Tel Drive) on the north, 15th Avenue South on the east, and the proposed LRT mainline on the west (see Exhibit F-4). Sixteenth Avenue South runs through the middle of the site and connects to 15th Avenue South via 6th Street South. Regional access would be provided by 5th Street, 11th Avenue, Excelsior Boulevard to the north, and Highway 169 to the east. Two small constructed ponds and surrounding wetlands are located at the south end of the site adjacent to the railroad. The Hopkins OMF site would be located about 1,000 feet south of the proposed Shady Oak Station and closely adjacent to the proposed light rail alignment, about midway between downtown Minneapolis and Eden Prairie.

The OMF 9A site would be comprised from eight parcels: one undeveloped lot and seven properties with office/warehouse uses or light manufacturing and assembly. Development on parcels adjacent to the Hopkins site includes office/industrial to the north, the Hopkins landfill south of the CP tracks, office/industrial/distribution to the east across 15th Avenue, and industrial/distribution to the west beyond the proposed LRT mainline.

The development of conceptual layout plans led to one layout design for the Hopkins OMF site due to the shape and parcels, as well as its connection to the adjacent proposed light rail alignment. Fifth Street and 15th Avenue would remain in place, and access from the OMF to the light rail mainline would occur at 5th Street. Under the conceptual layout design, the proposed OMF would be located along the west edge of the site adjacent to the proposed light rail mainline. As a result of that layout, there would likely be a portion of the site to the east that would remain unused as part of the OMF. Because the eastern side of the site has relatively few buildings and other improvements, if there were any excess property remaining after construction that the Council and the FTA chose to dispose of, this land could potentially accommodate new industrial development (see Section 3.1.2.2 of the Supplemental Draft EIS for additional information on how the project could address the disposition of unused portions of parcels acquired by the project).

TABLE F.4-3
Operations and Maintenance Facility Site Selection – Third-Step Evaluation

	Screening Criteria										
	Operational Characteristics										
		Alignment Proximity/Connectivity			Alignment Location		Site Access				
OMF Site #	Site Configuration	Length of Lead Tracks (feet)	Lead Tracks At-Grade	Lead Track Redundancy	Distance from Center of Mainline (miles)	Distance from Downtown Minneapolis (miles)	Roadway Access	Walking Distance to Station (miles)	Cost Comparison (millions)	Status	Rationale
3/4 Eden Prairie City Garage	Compatible with OMF	500	Yes	Possible	7.5	15.0	Local	0.25	$25 – $30m greater	Retained	• Consistent with land use/zoning • No City objections to conditions, dependent on public works • Opportunity to include station and park-and-ride facilities on one site
6 Eden Prairie Mitchell East	Compatible with OMF	0	Yes	Yes	6.5	14.0	Local	0.33	$25 – $30m greater	Dismissed	• Site dependent upon Eden Prairie LRT mainline alignment • Operator relief access is poor or not favorable due to distance to station • Wetland impacts • Not consistent with City and property owner development plans
8 Eden Prairie Shady Oak/ West 70th St.	Compatible with OMF	500	Bridge Required	No	3.5	11.0	State	0.5	$45 – $50m greater	Dismissed	• Not consistent with City's redevelopment plans • Operator relief access is poor or not favorable due to distance from station • Require substantial lead track/structure
9 Minnetonka K-Tel	Compatible with OMF	500	Yes	Possible	1.0	8.5	Local	0.25	$50 – $55m greater	Dismissed	• Requires sewer interceptor relocation • Residential use west of Shady Oak Rd. • Sensitive medical assembly facility to south
9A Hopkins K-Tel East	Compatible with OMF	0	Yes	Possible	1.0	8.5	Local	0.25	$35 – $40m greater	Retained	• Consistent with land use and zoning • Operator relief access/station proximity favorable • Freight rail and LRT alignment buffer along property borders • Redevelopment potential of remnant area
11A Hopkins 11th Ave. West	Compatible with OMF	0	Yes	Possible	0.5	8.0	Local	0.25	$40 – $45m greater	Dismissed	• Nine Mile Creek crosses the site • Known site contamination • Potential development impact on Shady Oak Station area
12/13 Hopkins/ St. Louis Park Excelsior	Compatible with OMF	0	Yes	Yes	1.5	7.0	Local	0.33	$45 – $50m greater	Dismissed	• Environmental justice concerns • Neighborhood opposition • Multifamily residential to the west/south • Not consistent with land use guidance and City's redevelopment goals

TABLE F.4-4
Operations and Maintenance Facility Site Selection – Fourth-Step Evaluation

OMF Site #	Screening Criteria		Rationale	Status
	Strengths	Weaknesses		
3/4 Eden Prairie City Garage	• Use would be consistent with municipal adopted land use guiding and zoning • Operator relief would be available given proximity to LRT station (Shady Oak) • City presented no objection to OMF, with exception of public works building location • Opportunity would exist to include LRT station and park-and-ride facilities on or near site	• Site dependent on Eden Prairie LRT mainline alignment extending to the site • Wetland impacts would likely require permitting and mitigation • Noise and vibration impacts would pose concerns for Eaton industrial property • End-of-line location would pose operational limitations • Coordination with station and park-and-ride facilities would be required	Improved out-of-service operations and operating cost savings would be realized due to its relative central location on the proposed light rail line (about midway between downtown Minneapolis and Eden Prairie) compared to the Eden Prairie OMF (3/4), which would be located west of the light rail line's western terminus. Why? Because Site 3/4 would require 6 additional operators for the system, which will increase operations cost.	Dismissed
9A Hopkins K-Tel East	• Use would be consistent with adopted municipal land use guiding and zoning • Operator relief would be available given proximity to LRT station (Shady Oak) • Freight rail and proposed LRT alignment would buffer south and west property borders • Redevelopment potential remnant areas would be possible	• Wetland impacts would likely require permitting and mitigation • Flood-prone conditions would need to be addressed in the southern portion of the site • Geotechnical considerations may be limiting in southern portion of site • City has presented concerns regarding tax base and jobs impacts		Retained

EXHIBIT F-5
Eden Prairie OMF Site 3/4 – Option 1

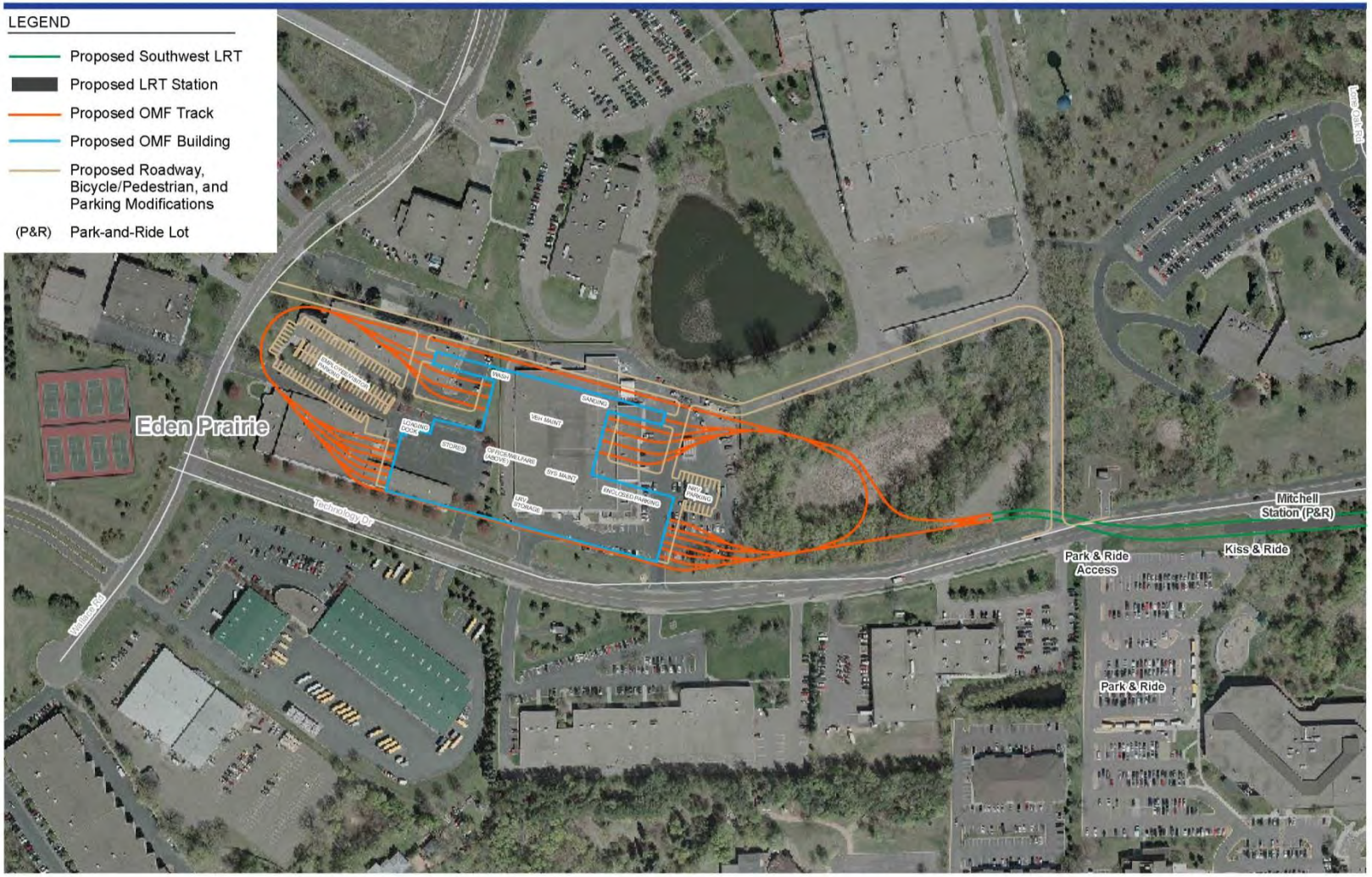
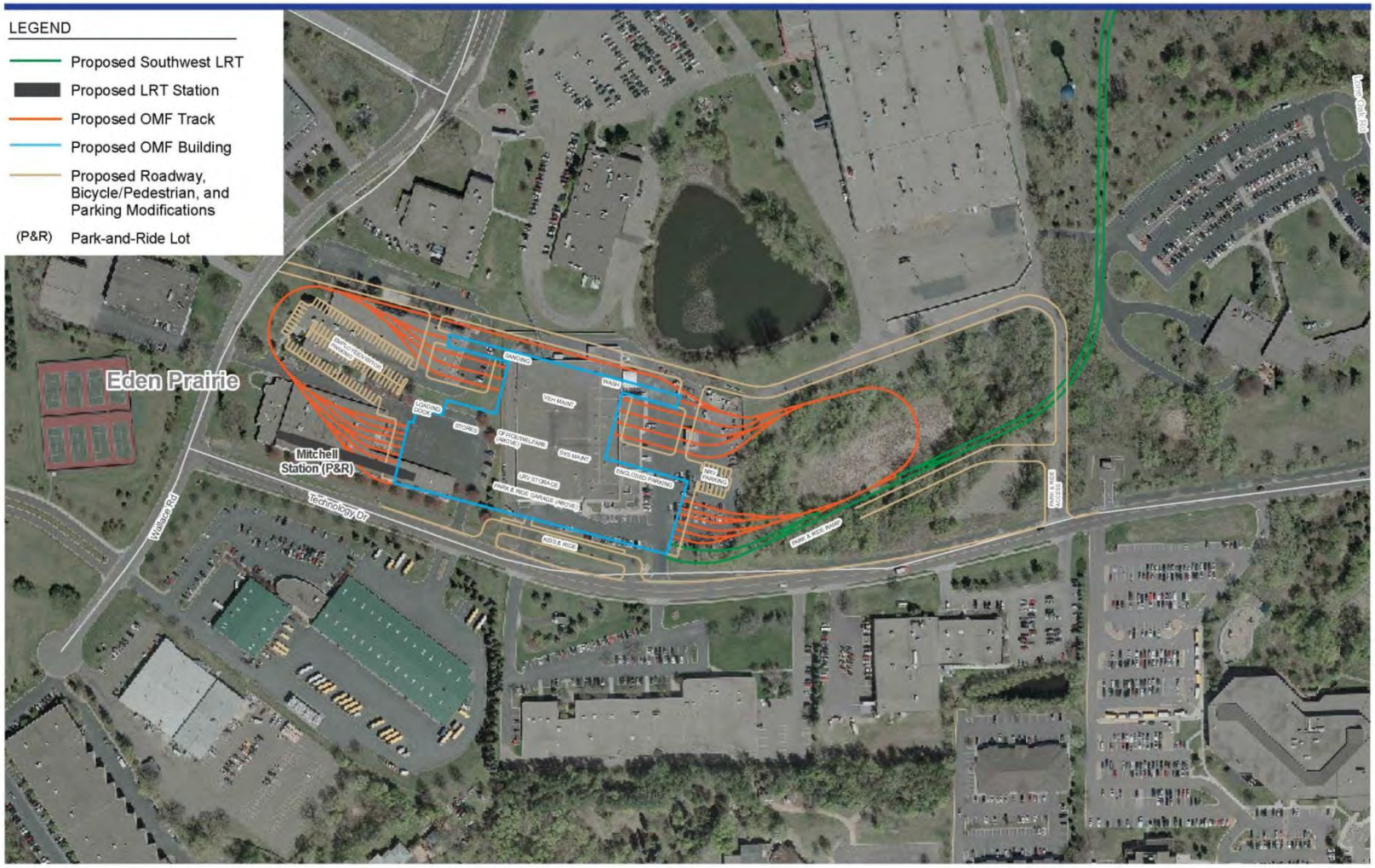
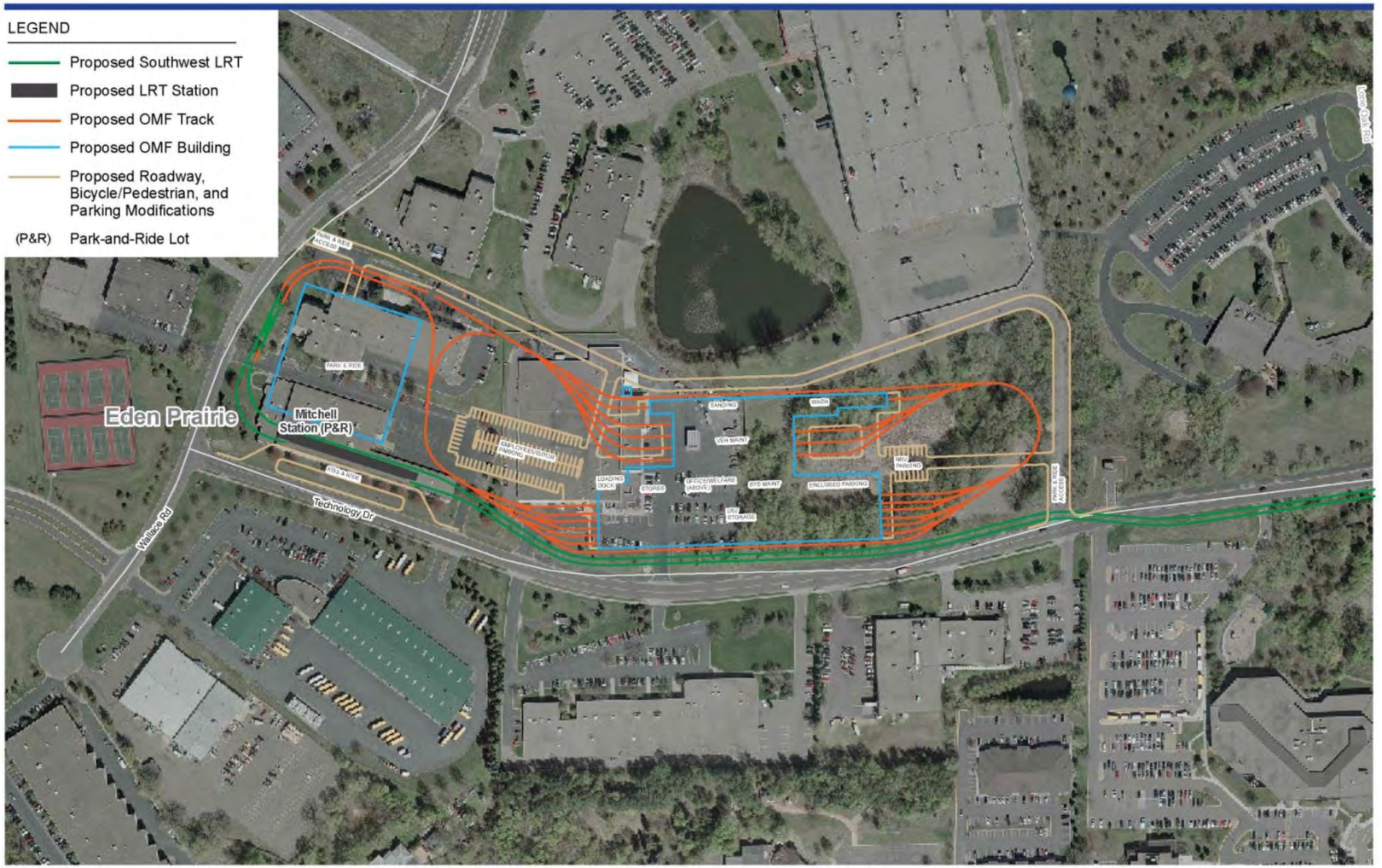


EXHIBIT F-6
Eden Prairie OMF Site 3/4 – Option 2



SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Eden Prairie OMF Site 3/4 – Option 2	Exhibit F-6	NORTH 0 150 300 Feet	METROPOLITAN COUNCIL

EXHIBIT F-7
Eden Prairie OMF Site 3/4 – Option 3



SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Eden Prairie OMF Site 3/4 – Option 3	Exhibit F-7	NORTH 0 150 300 Feet	METROPOLITAN COUNCIL

4.2.5 Conclusion

Based on the analysis summarized in this section and Table F.4-4, and through the process described in Sections 1.0 and 2.0 of this appendix, the Council identified the Hopkins OMF 9A as the OMF to be incorporated into the project's LPA. A key advantage of the Hopkins OMF is the improved out-of-service operations and operating cost savings due to its relatively central location on the proposed light rail line (about midway between downtown Minneapolis and Eden Prairie), compared to the Eden Prairie OMF 3/4, which would be located west of the light rail line's western terminus.

The LPA, as evaluated in the Supplemental Draft EIS, reflects the inclusion of the Hopkins OMF 9A. Other potential OMF sites developed and evaluated in this section were dismissed from further study.

5.0 St. Louis Park/Minneapolis Segment

This section provides a summary of the design adjustments to the LPA in the St. Louis Park/Minneapolis Segment that were developed and evaluated after publication of the Draft EIS. Section 5.1 of this appendix provides background information on the light rail-related improvements and freight rail modifications in the segment, which were addressed in the Draft EIS. Section 5.2 of this appendix provides a description of the range of design adjustments to the LPA considered by the Council within the St. Louis Park/Minneapolis Segment and a summary of how those potential design adjustments were evaluated.

5.1 Background

As previously noted, the Draft EIS evaluated two alternatives that combined the LPA and freight rail modifications in the area within the St. Louis Park/Minneapolis Segment: LRT 3A and LRT 3A-1 (see Exhibit F-8). As described in the Draft EIS, both LRT 3A and LRT 3A-1 encompassed the LPA at that time, which included a proposed light rail alignment, stations, park-and-ride lots, and related roadway, bicycle and pedestrian improvements. As defined in Chapter 2 of the Draft EIS, the primary difference between LRT 3A and LRT 3A-1 is how freight rail modifications would be incorporated into the LPA.

Following is a brief summary of the common proposed light rail-related improvements and differing freight rail modifications included in the Draft EIS under LRT 3A and LRT 3A-1. Sections 2.2.1.3 and 2.2.3 of the Draft EIS provide additional information.

- **Light Rail-Related Improvements.** Within the Draft EIS, the LPA under LRT 3A and LRT 3A-1 included a proposed light rail alignment, stations, park-and-ride lots, and related roadway, bicycle and pedestrian improvements. Those improvements are described in Section 2.3 of the Draft EIS under LRT 3A and LRT 3A-1. LRT 3A and LRT 3A-1 in the Draft EIS in the St. Louis Park/Minneapolis Segment included six light rail stations and six surface park-and-ride lots, with a total capacity of 650 spaces. In general under LRT 3A, the light rail alignment would have been located primarily at-grade, north of the existing freight rail alignment and trail for the section west of the Kenilworth Corridor and north of the trail in the Kenilworth Corridor, with freight rail relocated to the MN&S Spur and Wayzata Subdivision in St. Louis Park and removed east of the MN&S Spur. Under LRT 3A-1, the light rail alignment would be located in the same location west of the MN&S Spur, with a light rail bridge over the freight tracks between the MN&S Spur and Wooddale Station, which would locate the light rail tracks south of the freight rail tracks. Within the Kenilworth Corridor, light rail would be located primarily at-grade south of the existing freight rail alignment and north of the existing trail. The trail would be located south of the light rail line, east of Wooddale Avenue South.
- **Freight Rail-Related Improvements.** The Draft EIS evaluated two ways in which freight rail modifications would be incorporated into the LPA. Under LRT 3A, TC&W freight trains currently operating along the Kenilworth Corridor would be rerouted to the MN&S Spur and Wayzata Subdivisions; or, under LRT 3A-1, the TC&W freight trains would continue to operate along the Bass Lake Spur and Kenilworth Corridor. LRT 3A and LRT 3A-1 are also referred to in the Draft EIS as "relocation" and "co-location," respectively, and are shown on Exhibit F-8.

5.2 Design Adjustments Considered in the St. Louis Park/Minneapolis Segment

After the Draft EIS public comment period, the development and evaluation of adjustments to the LPA in the St. Louis Park/Minneapolis Segment was undertaken by the Council using the process illustrated in Exhibit F-9 and described in detail in this section.

In this segment, the project team developed and evaluated two sets of potential adjustments to the LPA:

- **Set 1 Adjustments.** The first set of potential adjustments for the St. Louis Park/Minneapolis Segment focused on the question of whether the LPA should include: (1) the relocation of TC&W freight trains currently operating along the Bass Lake Spur and Kenilworth Corridor to sections of the MN&S Spur and Wayzata Subdivision; or (2) the continued operation of TC&W freight trains along the Bass Lake Spur and Kenilworth Corridor. See Exhibit F-10 for an illustration of the freight rail owners and operators within the project vicinity.
- **Set 2 Adjustments.** The second set of potential adjustments for the St. Louis Park/Minneapolis Segment focused on other potential adjustments to light rail-related improvements that would occur throughout the segment, which would affect freight rail modifications but would not entail relocation of freight rail service outside of the Kenilworth Corridor.

The project team closely coordinated the development and evaluation of these two sets of potential adjustments to the LPA in the St. Louis Park/Minneapolis Segment. The resulting light rail related design adjustments and freight rail modifications identified by the Council in April 2014 and July 2014 reflect a unified set of adjustments to the LPA and freight rail modifications, as described in Section 2.5 of the Supplemental Draft EIS. That unified set of adjustments forms the basis for the evaluation of potential environmental impacts addressed in Chapter 3 of the Supplemental Draft EIS.

5.2.1 Set 1 Design Adjustments

After the close of the Draft EIS public comment period, the Council undertook a four-step process to develop and evaluate Set 1 Adjustments to the LPA directly related to the following: (1) whether TC&W freight trains currently operating along the Kenilworth Corridor should be rerouted to sections of the MN&S Spur and Wayzata Subdivision (termed “freight rail relocation adjustments”); or (2) whether the TC&W freight trains should continue to operate along the Bass Lake Spur and Kenilworth Corridor as they currently do (termed “Kenilworth Corridor adjustments”).

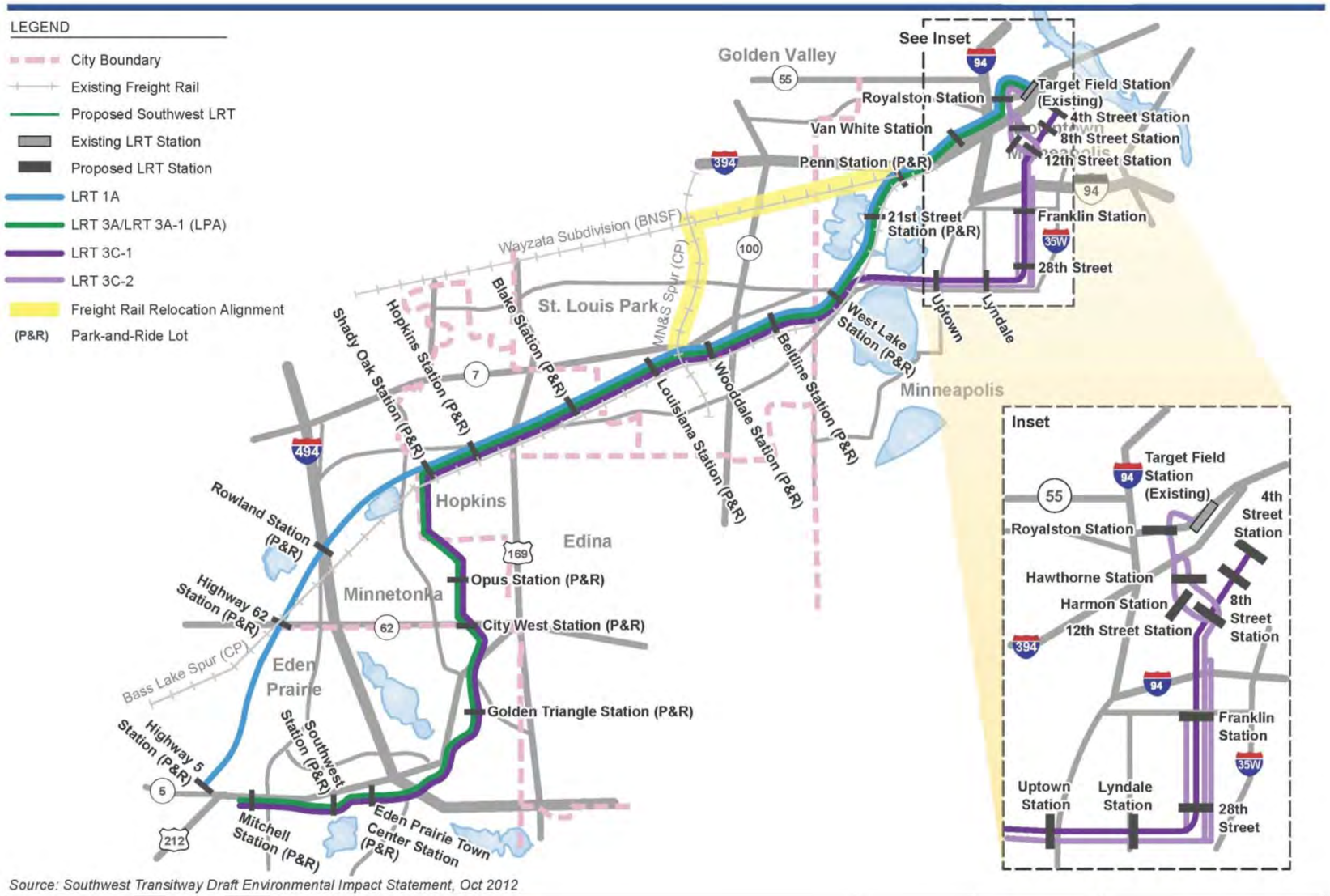
An important element of the Set 1 design adjustment evaluation was the assessment of each design adjustment’s ability to meet a key element of the project’s Purpose and Need Statement: the “need to develop and maintain a balanced and economically competitive multimodal freight system” (see Chapter 1 of the Supplemental Draft EIS). As such, the evaluation of the Set 1 Design Adjustments included an assessment of the effects of the design adjustments on freight rail operations and safety, which involved the participation of freight rail owners and operators in the development and review of potential freight rail modifications that could be incorporated into the LPA. The results of that coordination are reflected in the reporting of Set 1 Design Adjustment evaluation measures cited within this section.

The following four steps were used for evaluation of the Set 1 Design Adjustments. See Tables F.5-1 and F.5-2 for a listing of the design adjustments addressed in the Set 1 evaluation process and the results of the evaluation process, respectively.

- **First-Step Evaluation**. The development of a relatively wide range of adjustments to the light rail improvements and freight rail-related modifications under the two freight rail operating scenarios, focusing on meeting key design parameters, while avoiding or minimizing adverse impacts and minimizing project costs. The resulting adjustments were then presented to the public, stakeholders and participating agencies for review and comment. Based on comments received from the public, stakeholders, and participating agencies and on the evaluation measures summarized in Table F.5-3, the design adjustments were narrowed to one freight rail relocation and two Kenilworth Corridor adjustments.

EXHIBIT F-8

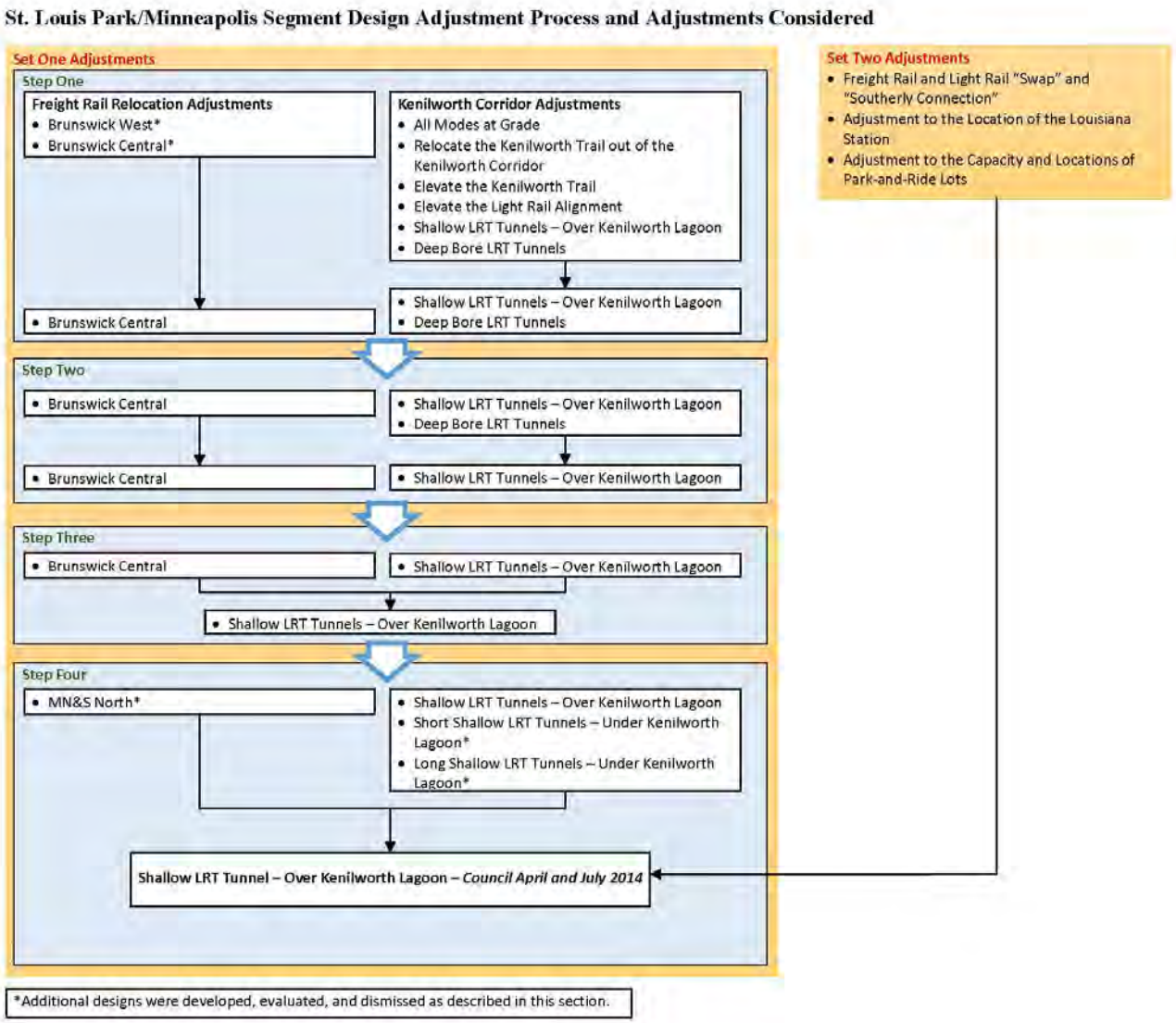
LRT Build Alternatives Evaluated in the Draft EIS



Source: Southwest Transitway Draft Environmental Impact Statement, Oct 2012

SOUTHWEST	Southwest LRT Supplemental Draft EIS LRT Build Alternatives Evaluated in the Draft EIS	Exhibit F-8	NORTH 0 1 Miles	METROPOLITAN COUNCIL

EXHIBIT F-9
St. Louis Park/Minneapolis Segment Design Adjustment Process and Adjustments Considered



- **Second-Step Evaluation.** A detailed analysis of the potential adjustments identified in the first-step evaluation, narrowing to one design adjustment under each of the two freight rail operating scenarios. This evaluation included public and agency review of and comment on the second-step findings (see Table F.5-5 for a summary of the second-step evaluation measures).
- **Third-Step Evaluation.** Refinement of the two second-step design adjustments, addressing public and agency comments, followed by a detailed assessment of the tradeoffs between the two potential adjustments remaining after the second-step evaluation, and identification of one design adjustment to advance into the fourth-step evaluation (see Table F.5-6 for a summary of the Third-Step evaluation measures).
- **Fourth-Step Evaluation.** The Fourth Step evaluation consisted of three components:
  - An independent engineering analysis that (1) evaluated potential freight rail relocation adjustments that were developed or identified in prior studies and (2) developed and evaluated a new design adjustment that would relocate existing freight rail service from the Kenilworth Corridor (this new design adjustment (MN&S North) was compared to the freight rail relocation design adjustment (Brunswick Central) advanced from the third-step evaluation)
  - The development and evaluation of two variations of the design adjustment advanced from the third-step evaluation (these two new designs (Short Shallow LRT Tunnel – Under Kenilworth Lagoon and Long Shallow LRT Tunnel – Under Kenilworth Lagoon), suggested by a local jurisdiction, were compared to the design adjustment advanced from the third-step evaluation)Identification by the Council of the design adjustment incorporated into the LPA and its further refinement to reflect a memorandum of understanding between the Council and the City of Minneapolis. (See Appendix D, Sources and References Cited, for instructions on how to access the executed memorandum).

Table F.5-2 identifies the design adjustments developed and evaluated within each of the four steps, including identification of their status at the completion of each step. Following is a more detailed description of each step and the design adjustments developed and evaluated within each step.

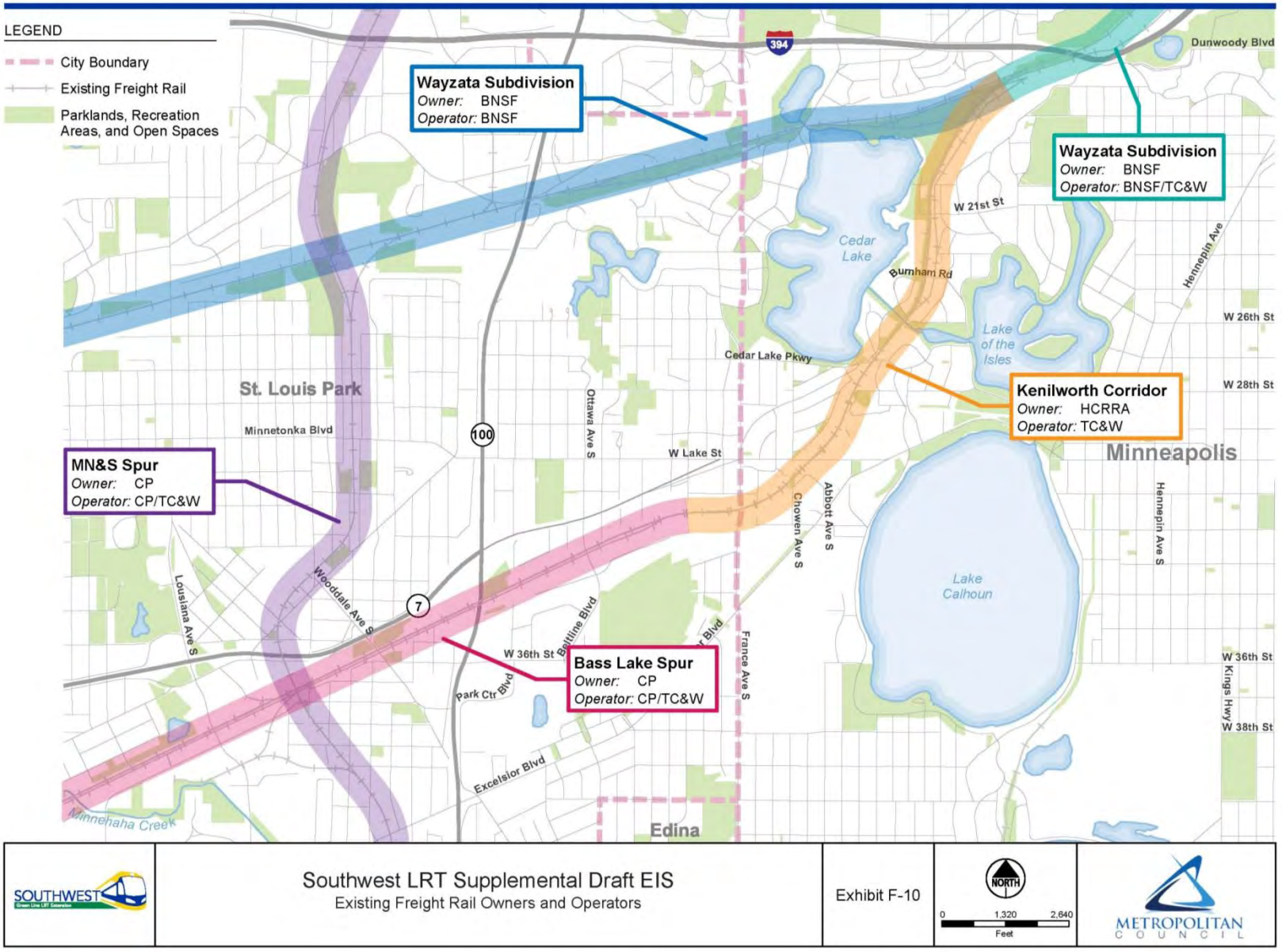
A. First-Step Evaluation

The first-step evaluation process for the Set 1 Design Adjustments in the St. Louis Park/Minneapolis Segment included the development and analysis of potential adjustments to both the existing freight rail lines and/or to the proposed light rail alignment and related improvements. However, the range of adjustments from the two efforts differ substantially: (1) the ***freight rail relocation adjustments*** focus almost exclusively on changes to the proposed freight rail alignment; and (2) the ***Kenilworth Corridor adjustments*** primarily focus on potential changes to the proposed light rail improvements within the Kenilworth Corridor.

In addition to ensuring that the project continues to meet its Purpose and Need, as outlined in Chapter 1 of the Supplemental Draft EIS, both of these efforts had the same overall objectives: (1) develop potential adjustments that meet the current freight rail operator's operational and safety requirements; (2) minimize adverse impacts to the project's surrounding environment, including avoiding or minimizing property acquisitions; and (3) minimize capital and operating costs.

The design adjustment process for the Set 1 Adjustments also included discussions with the affected railroad companies, including an examination of their existing operations and an assessment of freight rail alignment conditions between the Highway 169/Highway 62 interchange in the west to Cedar Lake Junction in the east. Key areas of concern expressed by affected freight rail companies on freight rail modifications developed within the Set 1 Adjustments included: freight rail safety related to the railroad's design and operating standards; and long-term freight rail operating complexities and costs. Draft designs of freight rail

EXHIBIT F-10
Existing Freight Rail Owners and Operators



modifications that were developed during this process and that were evaluated by the affected railroad companies were dismissed from further study if one or more of the affected railroad companies determined that the draft modification would not meet their design or operational safety standards. The draft freight rail modifications that were dismissed from further study based on design or operational concerns raised by the affected railroad companies are noted within this section.

TABLE F.5-1
St. Louis Park/Minneapolis Segment Design Adjustment Descriptions

	Option	Alignment Adjustment Description
Freight Rail Relocation[a]	Draft EIS LRT 3A	As presented in the Draft EIS, this adjustment would provide a new connection to the CP MN&S Spur from the CP Bass Lake Spur near Louisiana Avenue and a reconstructed connection between the MN&S Spur and the BNSF Wayzata Subdivision. Maximum horizontal curve would be 8 degrees, and maximum compensated grade would be 1.82% for the connection from the Bass Lake Spur to the MN&S Spur.
	Brunswick West	Brunswick West option would have the modified freight rail alignment to minimize the number of horizontal curves, elevated to minimize the number of vertical curves and vertical grade changes and to provide adequate grade separation to allow Dakota Ave. and Lake St. to extend under the freight tracks. The connection would be located west of the existing CP MN&S spur and cross over the Wooddale Ave./Lake St. intersection to tie into the MN&S Spur east of Brunswick Avenue South, near West 32nd Street. Maximum horizontal curve 4 degrees, maximum compensated grade 0.8.
	Brunswick Central	Brunswick Central option would have the modified freight rail alignment to minimize the number of horizontal curves, elevated to minimize the number of vertical curves and vertical grade changes and to provide grade separation of Dakota Ave. and Lake St. to extend under the freight tracks. The alignment would be located west of the existing CP MN&S Spur corridor and cross east of the Wooddale Ave./Lake St. intersection to tie into the MN&S Spur at the same location as Brunswick West. Maximum horizontal curve 4 degrees, maximum compensated grade 0.8.
	MN&S North	MN&S North Alignment was developed as part of the independent freight rail analysis performed by TranSystems. This alignment adjustment was developed to minimize both the impacts of the elevated profile and straightened alignment between Highway 7 and 34th Street and the impacts on commercial, residential, and public properties associated with the Brunswick Central Elevated alignment. Maintains the existing MN&S rail tracks south of Highway 7 including the current freight rail bridge over the Bass Lake Spur to a connection with the existing alignment between Library Lane and Dakota Avenue. The alignment begins with an elevated grade on bridge structure on the Bass Lake Spur west of Louisiana Avenue, continuing east on bridge structure over the west corner of the Xcel Substation and across Highway 7, matching existing grades at Library Lane and connecting to the existing MN&S between Library Lane and Dakota Avenue. Maximum horizontal curve 5 degrees, maximum compensated grade 0.95.
Kenilworth Corridor	Draft EIS LRT 3A-1	As presented in the Draft EIS. A preliminary typical section is assumed to be 94 feet wide. This width includes 25 feet of separation between the freight rail track and outside edge of right-of-way, 25 feet of separation between the freight rail track and LRT track (centerline to centerline), 14 feet of separation between the two LRT tracks (centerline to centerline), and 10-foot spacing between LRT track and the trail. A 16-foot minimum width would be used for the trail.
	All Modes At-Grade (81-foot-wide section)	Similar to LRT 3A-1, but based on a revised typical section that would be 81 feet wide (based on coordination with TC&W Railroad). This width would include 12 feet of separation between the freight rail track and outside edge of right-of-way, generally matching existing conditions. The remaining section would match the 94-foot-wide section of LRT 3A-1.
	Trail Relocation	The Trail Relocation option would include rerouting the trail west of the existing TC&W tracks between 21st St. and Cedar Lake Pkwy. The west segment of the relocated trail would cross Cedar Lake Pkwy. at-grade, run along the existing median on Sunset Blvd., cross France Ave. at-grade or on a structure, continue south, and cross County Rd. 25 to the County Rd. 25 service road to Inglewood Ave. From Inglewood Ave., the trail would turn south and connect to the current Cedar Lake Trail alignment. The east segment would run along Cedar Lake Pkwy., cross the parkway, and be located between Dean Pkwy. one-way pair and connect to the current Midtown Greenway trail alignment east of Dean Pkwy.
	Elevated Trail	The elevated trail structure would be approximately 3,000 feet long and would be located between the freight rail track and LRT tracks north of West Lake St. to north of Burnham Rd. The elevated trail would approach touchdown south of West Lake St. and north of Burnham Rd. The trail would be elevated approximately 30 feet high, with a 20-foot-wide trail surface supported by 7-foot-wide piers. A vertical connection at Cedar Lake Pkwy. would be provided.
	Elevated LRT	The elevated LRT structure would be approximately 3,000 feet long and would be located between the freight rail track and trail. It would run along the Kenilworth Corridor from the Midtown Greenway to Burnham Rd. with varying height of 35 to 38 feet, supported by 10-foot-

	Option	Alignment Adjustment Description
		wide piers.
	Shallow Cut-and-Cover Tunnels – Over Kenilworth Lagoon[b]	Would consist of two tunnels and a generally at-grade section connecting the two tunnels: The South Tunnel would be approximately 2,200 feet long and located along the Kenilworth Corridor with the south portal beginning at West Lake St. and the north portal south of the Channel Creek Crossing. Over the channel, LRT alignment would cross at-grade on a bridge 14 feet above the channel water level. The section of LRT track over the channel would be approximately 1,088 feet long (including transition zones). North of the channel, LRT alignment would drop into the North Tunnel, a 2,500-foot tunnel south of Burnham Rd. to north of 21st St. There would be 300-foot transition zones outside the tunnel portals.
	Kenilworth Deep Bore LRT Tunnel	Two parallel tunnels that would be approximately 5,900 feet long and would run along the Kenilworth Corridor with the south portal at West Lake St. and the north portal north of 21st St. There would be a 1,000-foot-long cut-and-cover tunnel segment and a 500-foot-long transition section south of the southern portal. There would be a 550-foot-long cut-and-cover tunnel segment and a 500-foot transition section north of the northern portal. The twin tunnels would be about 20 feet in diameter with a minimum of 30 feet of cover. The deep tunnel would be approximately 30 feet below the Kenilworth Lagoon surface elevation.
	Short Shallow Cut-and-Cover Tunnel – Under Kenilworth Lagoon[c]	The Short Shallow Cut-and-Cover Tunnel – Under Kenilworth Lagoon would consist of a tunnel approximately 3,100 feet in length along the Kenilworth Corridor with the south portal beginning at West Lake Street and the north portal north of the Kenilworth Channel. At the channel, the LRT crosses below-grade, in the tunnel beneath the water level. There are 300-foot transition zones outside the tunnel portals.
	Long Shallow Cut-and-Cover Tunnel – Under Kenilworth Lagoon[c]	The Long Shallow Cut-and-Cover Tunnel – Under Kenilworth Lagoon would consist of a tunnel approximately 5,800 feet in length along the Kenilworth Corridor with the south portal beginning at West Lake Street and the north portal north of 21st Street. At the channel, the LRT crosses below-grade, in the tunnel beneath the water level. There are 300-foot transition zones outside the tunnel portals

[a] Additional freight rail modifications were also developed and evaluated in the first-step evaluation that were dismissed from further consideration due to safety and freight rail operating concerns expressed by one or more effected freight rail operators/owners. Those additional modifications included MN&S Modified; Brunswick East; an at-grade variation of the Brunswick West; and an at-grade variation of the Brunswick Central. This section includes additional information on these variations.

[b] On July 9, 2014, considering a recommendation from the Corridor Management Committee (CMC), the Metropolitan Council (Council) identified additional design adjustments to the LPA within the City of Minneapolis, which were proposed in the then-draft memoranda between the Council and the City of Minneapolis (see Appendix D, Sources and References Cited, for instructions on how to access the executed memoranda). In summary, the additional design adjustments: (1) reduced project capital costs by eliminating the northern of the two proposed light rail tunnels in the Kenilworth Corridor (including the re-establishment of the proposed at-grade light rail station at 21st Street); (2) incorporated into the LPA a variety of bicycle and pedestrian improvements associated with proposed light rail stations in the City of Minneapolis; and (3) established the Council's and the City's intent relative to aspects of long-term property ownership and freight rail operations in the Kenilworth Corridor.

[c] In February 2014, the Minneapolis Parks and Recreation Board requested that the Council evaluate a design adjustment that would connect the two Shallow LRT Tunnels with a cut-and-cover constructed tunnel segment under the Kenilworth Lagoon, rather than a bridge over the lagoon. In response, the Short and Long Shallow LRT Tunnel – Under Kenilworth Lagoon design adjustments were developed and evaluated as a part of the fourth-step of evaluation. In addition, project staff developed variations of the Short and Long Shallow LRT Tunnel – Under Kenilworth Lagoon design adjustments to evaluate if the northern and southern cut-and-cover LRT tunnel segments could be connected under the Kenilworth Lagoon via a bored tunnel segment, rather than via a cut-and-cover constructed tunnel segment. These variations were dismissed from further consideration due to schedule delays, complex construction techniques and cost factors. This section includes additional information on these variations.

Acronyms: CP = Canadian Pacific Railway; MN&S = Minneapolis, Northfield, and Southern Railway; TC&W = Twin Cities and Western Railway Company.

TABLE F.5-2
Set 1 Design Adjustments Developed and Evaluated in the St. Louis Park/Minneapolis Segment, by Step

Step	Adjustment Type	Design Adjustments	Status[a]
1	Freight Rail Relocation[b]	Brunswick West	Dismissed
		Brunswick Central	Retained
	Kenilworth Corridor	All Modes at Grade	Dismissed
		Relocate the Kenilworth Trail out of the Kenilworth Corridor	Dismissed
		Elevate the Kenilworth Trail	Dismissed
		Elevate the Light Rail Alignment	Dismissed
		Shallow LRT Tunnels – Over Kenilworth Lagoon[c]	Retained
		Deep Bore LRT Tunnels	Retained
2	Freight Rail Relocation	Brunswick Central	Retained
	Kenilworth Corridor	Shallow LRT Tunnels – Over Kenilworth Lagoon[c]	Retained
		Deep Bore LRT Tunnels	Dismissed
3	Freight Rail Relocation	Brunswick Central	Dismissed
	Kenilworth Corridor	Shallow LRT Tunnels – Over Kenilworth Lagoon[c]	Retained
4	Freight Rail Relocation	MN&S North[d]	Dismissed
	Kenilworth Corridor	Shallow LRT Tunnels – Over Kenilworth Lagoon[c]	Retained[e]
		Short Shallow LRT Tunnel – Under Kenilworth Lagoon[f]	Dismissed
		Long Shallow LRT Tunnel – Under Kenilworth Lagoon[f]	Dismissed

[a] Status as of completion of the step.

[b] Additional freight rail modifications were also developed and evaluated in the first-step evaluation that were dismissed from further consideration due to safety and freight rail operating concerns expressed by one or more effected freight rail operators/owners. Those additional modifications included Brunswick East; an at-grade variation of the Brunswick West; and an at-grade variation of the Brunswick Central. This section includes additional information on these variations.

[c] The shallow tunnels would be constructed using a cut-and-cover technique.

[d] The MN&S North design adjustment was developed and evaluated as an element of the independent engineering analysis.

[e] The Shallow LRT Tunnels – Over Kenilworth Lagoon option, which included two proposed light rail tunnels (one south and one north of the Kenilworth Lagoon), was modified by the Council on July 9, 2014, to eliminate the northern light rail tunnel (primarily to reduce project capital costs and to allow for an at-grade light rail W 21st Street and to make other related design modifications.

[f] In February 2014, the Minneapolis Parks and Recreation Board requested that the Council evaluate a design adjustment that would connect the two Shallow LRT Tunnels with a cut-and-cover-constructed tunnel segment under the Kenilworth Lagoon, rather than a bridge over the lagoon. In response, the Short and Long Shallow LRT Tunnel – Under Kenilworth Lagoon design adjustments were developed and evaluated as a part of the fourth-step of evaluation.

TABLE F.5-3

St. Louis Park/Minneapolis Segment – First-Step Evaluation – Freight Rail Relocation Adjustments[a]

Alignment Adjustment	Costs	Measures	Status
Draft EIS	$91m[b]	• Rejected by railroad companies, described in comments received on the Draft EIS, due to the following concerns: — Rejected by railroad companies, described in comments received on the Draft EIS, due to the following concerns: — Includes reverse horizontal curves and a number of vertical curves and vertical grade changes that would compromise freight rail operational safety — High compensated grade — Higher operational cost for freight rail • Concerns from community groups, businesses, education institutions, and citizens received on the Draft EIS on the following: — Traffic surrounding high school — Bus flow for schools — Noise and vibration — Safety and security • At-Grade Freight Crossings: five at-grade freight crossings • Right-of-Way: Concerns surrounding loss of homes and businesses due to right-of-way acquisition • Environment: Additional wetland impacts in the "Iron Triangle" area at connection with BNSF Wayzata Subdivision	Dismissed
Brunswick West – Elevated	$285–$300m[c]	• Cost: higher capital cost • Railroad: — Supported by railroad companies from a physics of design standpoint — Freight rail operators expressed concern about potential increased operating cost to be addressed later if the design progressed — Freight rail is elevated between Highway 7 and Brunswick Ave. — Freight rail profile is raised north of 33rd St. — Eliminates freight tracks east of MN&S Spur on Bass Lake Spur/Kenilworth Corridor • Concerns from community and educational institutions: alignment would go through high school football field (potential 4(f) impact) • At-Grade Freight Crossings: removes five at-grade freight crossings • Right-of-Way: — Requires acquisition of a portion of the existing Xcel substation and potential impact on substation function — Concerns surrounding loss of homes and businesses due to right-of-way • Pedestrian: includes two new pedestrian underpasses • Roadway: — Requires lowering of south frontage road and reconfiguration of local street network — Improves frontage road south and north of Highway 7 by grade separation • Environment: Additional wetland impacts in the "Iron Triangle" area at connection with BNSF Wayzata Subdivision	Dismissed
Brunswick Central - Elevated	$275–$290m[c]	• Cost: Lower capital cost • Railroad: — Supported by railroad companies from a physics of design standpoint — Freight rail operators expressed concern about potential increased operating cost to be addressed later if the design progressed — Freight rail is elevated between Highway 7 and Brunswick Ave — Freight rail profile is raised north of 33rd St. — Eliminates freight tracks east of MN&S Spur on Bass Lake Spur/Kenilworth Corridor • Concerns from community and educational institutions: alignment would go through a portion of the Park Spanish Immersion School playground area (potential 4(f) impact) • At-Grade Freight Crossings: removes five at-grade freight crossings • Right-of-Way: Concerns surrounding loss of homes and businesses due to right-of-way • Pedestrian: includes two new pedestrian underpasses • Roadway: — Requires lowering of south frontage road and reconfiguration of local street network — Improves frontage road south and north of Highway 7 by grade separation • Environment: Additional wetland impacts in the "Iron Triangle" area at the connection with BNSF Wayzata Subdivision	Retained

[a] Additional freight rail modifications were also developed and evaluated in the first-step evaluation that were dismissed from further consideration due to safety and freight rail operating concerns expressed by one or more effected freight rail operators/owners. Those additional modifications included Brunswick West; and an at-grade variation of the Brunswick Central.

[b] Source: *Southwest Transitway Draft EIS* (FTA, HCRRA, Council; October 2012) in 2012 dollars, which used a different cost methodology than the Brunswick West/Central estimates.
[c] Includes freight track and structures (Louisiana Avenue to Cedar Lake Junction), BNSF siding, freight signaling, freight track removal, pedestrian underpass and roadway relocations/upgrades near St Louis Park High School, North Cedar Lake Trail crossing, right-of-way; Includes freight Common Elements costs of approximately $85 to $90 million (US-169 to Louisiana, Southerly Connector).

TABLE F.5-4
St. Louis Park/Minneapolis Segment – First-Step Evaluation – Kenilworth Corridor Adjustments

	Full Acquisitions	Costs	Measures	Status
Draft EIS or All Modes At-Grade (94-foot-wide section)	55 properties	$160 - $170m[a]	• Displacement of residences due to right-of-way acquisition • Potential visual impacts on Kenilworth Lagoon	Dismissed
All Modes At-Grade (81-foot-wide section)	26 properties	$135 – $145m[a]	• Displacement of residences due to right-of-way acquisition • Potential visual impacts on Kenilworth Lagoon	Dismissed
Relocate the Kenilworth Trail out of the Kenilworth Corridor	0 properties	$120 – $130m[b]	• Portion of the Kenilworth trail relocated from the Kenilworth Corridor between Cedar Lake Pkwy and Midtown Greenway • Strengths include the following: — No homes impacted — Low capital costs — Relocated trail would be an off-road, shared-use facility	Dismissed
Elevate the Kenilworth Trail	0 properties	$135 – $145m[c]	• Visual impacts due to structure height and connecting ramps • Impacts the visual quality and setting of the trail (e.g., separation from ground vegetation) and the addition of grade changes to the trail • Potential visual impacts on Kenilworth Lagoon • Strengths include the following: — No homes displaced	Dismissed
Elevate the Light Rail Alignment	0 properties	$190 – $200m[d]	• Visual impacts due to structure height and elevators at stations • Potential visual impacts on Kenilworth Lagoon • Strengths include the following: — No homes displaced	Dismissed
Place LRT in Shallow Cut-and-Cover Tunnels	0 properties	$235 – $250m[e]	• High capital cost • Challenging construction • Potential visual impacts on Kenilworth Lagoon • Eliminates 21st St. Station • Existing freight rail and trail bridges across the Kenilworth Lagoon would need to be replaced to accommodate construction of a new light rail and trail bridge and a freight rail bridge (which would be approximately 40 feet west of the existing freight rail bridge) • Strengths include the following: — Would not require acquisition of homes and businesses in the Kenilworth Corridor — Retains at-grade West Lake Station	Retained
Place LRT in Deep Bored Tunnels	0 properties	$405 – $420m[f]	• Highest capital cost • Challenging construction • Underground station at West Lake St. • Reconstruction of West Lake Street bridge • Eliminates 21st St. Station • Existing freight rail and trail bridges across the Kenilworth Lagoon would need to be replaced to accommodate construction of the bored tunnels[g] • Strengths include the following: Would not require acquisition of homes and businesses in the Kenilworth Corridor	Retained

[a] Includes freight track and structures (Louisiana Avenue to Cedar Lake Junction), trail bridges & retaining walls (east of Beltline Avenue, near Penn Station), deduct for LRT/trail underpass at Cedar Lake Parkway, right-of-way; includes freight Common Elements costs of approximately $85 to $90 million (US-169 to Louisiana Avenue, Southerly Connector).

[b] Includes trail aerial structure/retaining walls at France Avenue, connection to Cedar Lake Trail at Inglewood Avenue, freight track and structures (Louisiana Avenue to Cedar Lake Junction), trail bridges & retaining walls (east of Beltline Avenue, near Penn Station), deduct for LRT/trail underpass at Cedar Lake Parkway; includes freight Common Elements costs of approximately $85 to $90 million (US-169 to Louisiana Avenue, Southerly Connector).

[c] Includes elevated trail structure/retaining walls and retains 21st Street Station, vertical trail connection at Cedar Lake Parkway, freight track and structures (Louisiana Avenue to Cedar Lake Junction), trail bridges & retaining walls (east of Beltline Avenue, near Penn Station), deduct for LRT/trail underpass at Cedar Lake Parkway, deduct for trail bridge over Kenilworth Channel; includes freight Common Elements costs of approximately $85 to $90 million (US-169 to Louisiana Avenue, Southerly Connector).

[d] Includes elevated LRT structure/retaining walls and retains 21st Street Station, freight track and structures (Louisiana Avenue to Cedar Lake Junction), trail bridges & retaining walls (east of Beltline Avenue, near Penn Station), LRT direct fixation track, deduct for LRT/trail underpass at Cedar Lake Parkway, deduct for LRT bridge over Kenilworth Channel, right-of-way; includes freight Common Elements costs of approximately $85 to $90 million (US-169 to Louisiana Avenue, Southerly Connector).

[e] Includes north and south shallow cut-and-cover tunnels (tunnels, portals, systems/support facilities), freight track and structures (Louisiana Avenue to Cedar Lake Junction), trail bridges & retaining walls (east of Beltline Avenue, near Penn Station), LRT direct fixation track, temporary freight accommodations, Burnham Road bridge support, deduct for 21st Street Station, deduct for LRT/trail underpass at Cedar Lake Parkway; includes freight Common Elements costs of approximately $85 to $90 million (US-169 to Louisiana Avenue, Southerly Connector).

[f] Includes parallel deep bore tunnels (tunnels, bore pits, systems/support facilities), underground West Lake Station, freight track and structures (Louisiana Avenue to Cedar Lake Junction), trail bridges & retaining walls (east of Beltline Avenue, near Penn Station), removal/replacement of West Lake Bridge, LRT direct fixation track, temporary freight accommodations, deduct for LRT bridge over Kenilworth Channel, deduct for 21st Street Station, deduct for LRT/trail underpass at Cedar Lake Parkway; includes freight Common Elements costs of approximately $85 to $90 million (US-169 to Louisiana Avenue, Southerly Connector).

[g] The tunnels would be bored within the HCRRA and BNSF right-of-way at the Kenilworth Lagoon and the existing freight rail and trail bridges across the lagoon would need to be replaced because the existing wood bridge piers would likely extend into the tunneling area. Because the existing bridge piers are wood and there are no as-built construction drawings available, it would be difficult to determine precisely how deep the existing piers extend under the lagoon. However, even if they do not extend in the bored tunnel construction area, the piers would be susceptible to settlement during tunnel construction due to soil conditions at the site.

TABLE F.5-5
St. Louis Park/Minneapolis Segment Alignment Adjustment – Second-Step Evaluation

Adjustment	Full Acquisitions	Costs	Measures	Status
Brunswick Central - Elevated	32 properties	$275 - $290m[a]	• Supported by railroad companies from a physics of design standpoint • Cost: Second highest capital cost • Right-of-Way: — Displacement of homes and businesses due to right-of-way acquisition — Displacement of the Park Spanish Immersion School playground, which is likely a Section 4(f)-protected property • Traffic: — Requires lowering of south frontage road and reconfiguration of street network — Improves frontage road south and north of Highway 7 by grade separation • Freight: — Freight rail would be elevated between Highway 7 and Brunswick Avenue — Freight rail profile would be raised north of 33rd Street — Eliminates freight tracks east of MN&S Spur — Eliminates five at-grade freight rail crossings • Environment: Fill within relatively high-quality wetlands in the “Iron Triangle” area at BNSF connection • Potential effects to the historic Kenilworth Lagoon and the Brownie/Cedar Lakes channel • Bicycle and pedestrian: Allows for two new pedestrian grade underpasses • Stations: Retains 21st Street Station	Retained

Adjustment	Full Acquisitions	Costs	Measures	Status
Kenilworth Corridor Shallow LRT Tunnels	0 properties	$235 - $250m[b]	• Supported by railroad companies from a physics of design standpoint • Cost: Lowest capital cost • Right-of-Way: Does not require acquisition of homes and businesses in the Kenilworth Corridor • Challenging construction due to various constraints in the Kenilworth Corridor • Environment: At-grade crossing of Kenilworth Lagoon, with potential visual impacts • Bicycle and pedestrian: Temporary detour of Kenilworth Trail • Stations: Eliminates 21st St Station • Existing freight rail and trail bridges across the Kenilworth Lagoon would need to be replaced and the total width of the new bridges would be approximately double the width of the existing bridges • Potential adverse effect to the historic Kenilworth Lagoon	Retained
Kenilworth Deep Bore LRT Tunnels	0 properties	$405 - $420m[c]	• Supported by railroad companies from a physics of design standpoint • Cost: Highest capital cost – likely to be financially infeasible on regional level due to lack of local funding support • Right-of-Way: — Does not require acquisition of homes and businesses in the Kenilworth Corridor — Risk of potential settlement to immediately adjacent existing buildings and other structures due to construction • Construction: — Challenging construction due to various constraints in the Kenilworth Corridor — Reconstruction of West Lake Street due to tunneling conflicts with existing bridge piles, including demolition and replacement of the existing bridge over Kenilworth Corridor, generally located between Market Plaza and Chowen Ave S — Closure of West Lake Street (Market Plaza to Chowen Ave S) for approximately 12-18 months; related increases in traffic congestion; increased vehicle travel times due to out-of-direction travel and/or increased congestion • Operations: Increased travel time (approximately one minute) for all trips that would use the below ground West Lake Street station, reducing transit ridership • Existing freight rail and trail bridges across the Kenilworth Lagoon would need to be replaced to accommodate construction of the bored tunnels[d] • Potential effects to the historic Kenilworth Lagoon and the Brownie/Cedar Lakes channel • Bicycle and pedestrian: Temporary detour of Kenilworth Trail • Stations: — Includes underground West Lake Street Station — Eliminates 21st Street Station	Dismissed

[a] Includes freight track and structures (Louisiana Avenue to Cedar Lake Junction), BNSF siding, freight signaling, freight track removal, pedestrian underpass and roadway relocations/upgrades near St Louis Park High School, North Cedar Lake Trail crossing, right-of-way; includes freight Common Elements costs of approximately $85 to $90 million (US-169 to Louisiana Avenue, Southerly Connector).

[b] Includes north and south shallow cut-and-cover tunnels (tunnels, portals, systems/support facilities), freight track and structures (Louisiana Avenue to Cedar Lake Junction), trail bridges & retaining walls (east of Beltline Avenue, near Penn Station), LRT direct fixation track, temporary freight accommodations, Burnham Road bridge support, deduct for 21st Street Station, deduct for LRT/trail underpass at Cedar Lake Parkway; includes freight Common Elements costs of approximately $85 to $90 million (US-169 to Louisiana Avenue, Southerly Connector).

[c] Includes parallel deep bore tunnels (tunnels, bore pits, systems/support facilities), underground West Lake Station, freight track and structures (Louisiana Avenue to Cedar Lake Junction), trail bridges & retaining walls (east of Beltline Avenue, near Penn Station), removal/replacement of West Lake Bridge, LRT direct fixation track, temporary freight accommodations, deduct for LRT bridge over Kenilworth Channel, deduct for 21st Street Station, deduct for LRT/trail underpass at Cedar Lake Parkway; includes freight Common Elements costs of approximately $85 to $90 million (US-169 to Louisiana Avenue, Southerly Connector).

[d] The tunnels would be bored within the HCRRA and BNSF right-of-way at the Kenilworth Lagoon and the existing freight rail and trail bridges across the lagoon would need to be replaced because the existing wood bridge piers would likely extend into the tunneling area. Because the existing bridge piers are wood and there are no as-build construction

drawings available, it would be difficult to determine precisely how deep the existing piers extend under the lagoon. However, even if they do not extend in the bored tunnel construction area, the piers would be susceptible to settlement during tunnel construction due to soil conditions at the site.

TABLE F.5-6
St. Louis Park/Minneapolis Segment Alignment Adjustment – Third-Step Evaluation

	Strengths[a]	Weaknesses[a]	Status
Brunswick Central - Elevated	• Freight rail at-grade crossings eliminated between Blake Road and 28th Street along MN&S route • Non-emergency freight train horn use eliminated between Blake Road and 28th Street • Freight rail relocated away from St. Louis Park High School • Freight rail track removed in the Kenilworth Corridor and a portion of the Bass Lake Spur east of the existing MN&S Spur	• Acquisition of 32 residential, commercial, and institutional parcels • Elevated freight rail track through St. Louis Park and related visual impacts • Displacement of Park Spanish Immersion School playground, which is likely a Section 4(f) protected property • Construction challenges to accommodate ongoing freight rail traffic • Greater amount of wetlands filled • Community cohesion impacts • Greater capital costs • Additional design refinements and/or operating agreement with affected freight railroads would likely be required to address potential adverse economic impacts to the affected railroads, which would likely increase project costs	Dismissed
Kenilworth Corridor Shallow LRT Tunnels	• No acquisition of homes and businesses in Kenilworth Corridor • 200-plus LRT trips per day mostly below-grade through Kenilworth Corridor • LRT daylights between north and south tunnels for approximately 20 seconds per train • West Lake Street bridge preserved • Kenilworth Trail preserved within corridor for long-term • Lower capital costs • No adverse effects to groundwater or nearby lake levels	• 21st Street Station eliminated • Council sewer relocation • Temporary detour of Kenilworth Trail	Retained

[a] See also Table F.5-6 for additional evaluation measures considered in the third-step evaluation.

TABLE F.5-7
St. Louis Park/Minneapolis Segment Alignment Adjustment – Fourth-Step Evaluation - Kenilworth Corridor Adjustments
Shallow LRT Cut-and-Cover Tunnels – Over Kenilworth Lagoon and MN&S North

Alignment Adjustment	Costs	Measures	Status
Shallow LRT Cut-and-Cover Tunnels – Over Kenilworth Lagoon	$235 - 250m[a]	Daily Freight Operations: Expected average of 2 freight trains daily on the MN&S corridor and 3 daily within the Kenilworth Corridor Daily LRT Operations: Expected average of 200-plus LRT trains per day in a tunnel and at-grade at the channel in the Kenilworth Corridor Safety Considerations: • 4 at-grade freight crossings (existing and proposed) – Wooddale, Beltline, Cedar Lake, 21st Street • 2 LRT at-grade crossing with freight –Wooddale and Beltline	Retained

Alignment Adjustment	Costs	Measures	Status
		• Freight at station areas - Wooddale, Beltline and West Lake Community (between Louisiana Ave and Cedar Lake): • No school buildings within 150 feet of freight tracks • 750 residential units within 150 feet of freight tracks • No street closures Right-of-Way: No permanent acquisitions (not including acquisitions for Louisiana Station or Southerly connection) Operating Costs: Increased operations and maintenance costs for ventilation, lighting and other tunnel systems Developable Land: Reduction of 2 acres of developable land Schedule: Lower risk of potential delays Stations: No 21st Street Station Channel Crossing: 74-feet combined width of two reconstructed bridges; total width, including space between bridges, of 82-feet Opening Year: 2019	
MN&S North	$240 - $265m[b]	Daily Freight Operations: Expected average of five freight trains daily on the MN&S corridor and zero daily within the Kenilworth Corridor Daily LRT Operations: Expected average of 200-plus LRT trains per day at-grade in the Kenilworth Corridor Safety considerations: • 2 at-grade freight crossings - Proposed new crossings at Library and Dakota, proposed closure of existing crossings at Walker, West Lake, 28th and 29th, new grade-separation at 27th • 3 LRT only at-grade crossings with Wooddale, Beltline, 21st Street • No freight at station areas • Opposed by affected freight rail operators due to safety and operational concerns Community (between Louisiana Ave to Cedar Lake): • One school building within 150 feet of freight tracks • 240 residential units within 150 feet of freight tracks • No street closures Right-of-Way: Permanent acquisition requiring relocations of 6 residential units, 7 private businesses and 1 school (not including acquisitions for Louisiana Station or Southerly connection) Operating Costs: Maintenance costs for an additional 5,400 linear feet of freight bridge structure and 81,000 square feet of freight retaining walls Developable Land: Addition of approximately 3 acres of developable land Schedule: Potential delay of up to two years Stations: Includes station at 21st Street Channel Crossing: 54-feet width of reconstructed single bridge over the channel Opening Year: 2021	Dismissed

[a] Includes north and south shallow cut-and-cover tunnels (tunnels, portals, systems/support facilities), freight track and structures (Louisiana Avenue to Cedar Lake Junction), trail bridges & retaining walls (east of Beltline Avenue, near Penn Station), LRT direct fixation track, temporary freight accommodations, Burnham Road bridge support, deduct for 21st Street Station, deduct for LRT/trail underpass at Cedar Lake Parkway; includes freight Common Elements costs of approximately $85 to $90 million (US-169 to Louisiana Avenue, Southerly Connector).

[b] TranSystems identified $112M in costs in an estimate provided to the Southwest LRT Project Office (February 7, 2014) including freight track and structures (Blake Road to BNSF near MN&S Spur), freight track and structures (Southerly Connection), BNSF siding, freight signaling, pedestrian overpass and roadway relocations/upgrades near St Louis Park High School, engineering/contingency; Southwest LRT Project Office identified additional costs for the design including freight track (US-169 to Blake Road), North Cedar Lake Trail crossing, additional right-of-way, additional LRT retaining walls, additional freight track removal, additional soft costs (contingency, escalation, engineering, financing); cost shown does not include Xcel substation impacts; cost shown includes freight Common Elements costs of approximately $90 to 100 million (US-169 to Louisiana Avenue, modified Southerly Connector with additional new freight rail structure length).

TABLE F.5-8

St. Louis Park/Minneapolis Segment Alignment Adjustment – Fourth-Step Evaluation - Kenilworth Corridor Adjustments

Shallow LRT Cut-and-Cover Tunnels – Over and Under Kenilworth Lagoon

Adjustment	Full Acquisitions	Costs	Measures	Status
Shallow LRT Cut-and-Cover Tunnels – Over Kenilworth Lagoon	0 properties	$240 – $260m[a]	• Cost: Lowest capital cost • Construction Considerations: — Less challenging construction (relative to other fourth-step Kenilworth Corridor adjustments) — Shorter construction period, 2019 opening year — Closure of recreational traffic on Kenilworth Lagoon of limited durations during construction of bridges • Visual impacts on Kenilworth Lagoon • Stations: Eliminates 21st Street Station • Channel Crossing: — At-grade LRT crossing of Kenilworth Channel — 74-feet combined width of two new bridges (combined pedestrian/LRT bridge and freight bridge); total width, including space between bridges, of 82-feet • Strengths include the following: — Would not require acquisition of homes and businesses in the Kenilworth Corridor — Achieves municipal goal to avoid co-locating freight rail traffic with light rail traffic at-grade along much of the length of the Kenilworth Corridor — Retains at-grade West Lake Station	Retained[b]
Short Shallow LRT Cut-and-Cover Tunnel – Under Kenilworth Lagoon	0 properties	$270 - $300m[c]	• Cost: Second highest capital cost • Construction Considerations: — Challenging construction due to substantially constrained construction environment — Existing freight rail and trail bridges across the lagoon would need to be replaced and their replacement would need to be sequenced with the tunnel construction — Longer construction period, 2020 opening year — Closure of recreational traffic on Kenilworth Lagoon for approximately one to two years during construction — Additional emergency ventilation and intermediate emergency egress stairways compared to two shorter tunnels — Volume of groundwater pumped during construction for the tunnel segment under the lagoon would increase substantially, compared to other tunnel segments — Challenges in developing and maintaining effective waterproofing systems around the submerged tunnel segment • Stations: Retains the 21st Street Station • Channel Crossing: — Below-grade LRT crossing of Kenilworth Channel — 43-feet combined width of two new bridges (pedestrian and freight); total width, including space between bridges, of 88 feet • Strengths include the following: — Would not require acquisition of homes and businesses in the Kenilworth Corridor — Achieves municipal goal to avoid co-locating freight rail traffic with light rail traffic at-grade along much of the length of the Kenilworth Corridor (but less than the other fourth-step Kenilworth Corridor adjustments) — Retains at-grade West Lake Station	Dismissed

Adjustment	Full Acquisitions	Costs	Measures	Status
Long Shallow LRT Cut-and-Cover Tunnel – Under Kenilworth Lagoon	0 properties	$305 - $345m[d]	• Cost: Highest capital cost • Construction Considerations: — Challenging construction due to substantially constrained construction environment — Existing freight rail and trail bridges across the lagoon would need to be replaced and their replacement would need to be sequenced with the tunnel construction — Longer construction period, 2020 opening year — Closure of recreational traffic on Kenilworth Lagoon for approximately one to two years during construction — Additional emergency ventilation and intermediate emergency egress stairways compared to two shorter tunnels — Volume of groundwater pumped during construction for the tunnel segment under the lagoon would increase substantially, compared to other tunnel segments — Challenges in developing and maintaining effective waterproofing systems around the submerged tunnel segment • Stations: Eliminates the 21st Street Station • Channel Crossing: — Below-grade LRT crossing of Kenilworth Channel — 43-feet combined width of two bridges (pedestrian and freight); total width, including space between bridges of 88 feet • Strengths include the following: — Would not require acquisition of homes and businesses in the Kenilworth Corridor — Achieves municipal goal to avoid co-locating freight rail traffic with light rail traffic at-grade along much of the length of the Kenilworth Corridor — Retains at-grade West Lake Station	Dismissed

[a] Includes north and south shallow cut-and-cover tunnels (tunnels, portals, systems/support facilities), freight track and structures (Louisiana Avenue to Cedar Lake Junction), trail bridges & retaining walls (east of Beltline Avenue, near Penn Station), LRT direct fixation track, temporary freight accommodations, Burnham Road bridge support, deduct for 21st Street Station, deduct for LRT/trail underpass at Cedar Lake Parkway; includes freight Common Elements (US-169 to Louisiana Avenue, Southerly Connector).

[b] On July 9, 2014, considering a recommendation from the Corridor Management Committee (CMC), the Metropolitan Council (Council) identified additional design adjustments to the LPA within the City of Minneapolis, which were proposed in the then-draft memoranda between the Council and the City of Minneapolis. (See Appendix D, Sources and References Cited, for instructions on how to access the executed memoranda.) In summary, the additional design adjustments: (1) reduced project capital costs by eliminating the northern of the two proposed light rail tunnels in the Kenilworth Corridor (including the re-establishment of the proposed at-grade light rail station at 21st Street); (2) incorporated into the LPA a variety of bicycle and pedestrian improvements associated with proposed light rail stations in the City of Minneapolis; and (3) established the Council's and the City's intents relative to aspects of long-term property ownership and freight rail operations in the Kenilworth Corridor.

[c] Includes north and south shallow cut-and-cover tunnels (tunnels, portals, systems/support facilities), freight track and structures (Louisiana Avenue to Cedar Lake Junction), trail bridges & retaining walls (east of Beltline Avenue, near Penn Station), LRT direct fixation track, temporary freight accommodations, Burnham Road bridge support, deduct for 21st Street Station, deduct for LRT/trail underpass at Cedar Lake Parkway. Includes additional tunnel segment under Kenilworth Lagoon (tunnel, systems/support facilities), additional LRT direct fixation track, deduct for LRT bridge over Kenilworth Lagoon, deduct for portion of north tunnel and LRT direct fixation track, retention of 21st Street Station; cost shown includes freight Common Elements (US-169 to Louisiana Avenue, Southerly Connector).

[d] Includes north and south shallow cut-and-cover tunnels (tunnels, portals, systems/support facilities), freight track and structures (Louisiana Avenue to Cedar Lake Junction), trail bridges & retaining walls (east of Beltline Avenue, near Penn Station), LRT direct fixation track, temporary freight accommodations, Burnham Road bridge support, deduct for 21st Street Station, deduct for LRT/trail underpass at Cedar Lake Parkway. Includes additional tunnel segment under Kenilworth Lagoon (tunnel, systems/support facilities), additional LRT direct fixation track, deduct for LRT bridge over Kenilworth Lagoon; cost shown includes freight Common Elements (US-169 to Louisiana Avenue, Southerly Connector).

The potential freight rail relocation adjustments developed and considered involved a range of changes to the freight rail modifications envisioned under LRT 3A (as described in Section 2.3.3 of the Draft EIS). The design adjustments developed primarily focused on changes to the potential freight rail connection between the Bass Lake and MN&S spurs and, to a lesser degree, to the potential freight rail connection between the MN&S Spur and the Wayzata Subdivision.

Conversely, the Kenilworth Corridor adjustments developed focused primarily on the development and evaluation of a range of significant changes to the proposed light rail alignment within the Kenilworth Corridor, compared to those proposed under LRT 3A-1 of the Draft EIS.

The first step of the evaluation process for Set 1 Adjustments resulted in the development and evaluation of the following potential design adjustments (see Exhibit F-11):

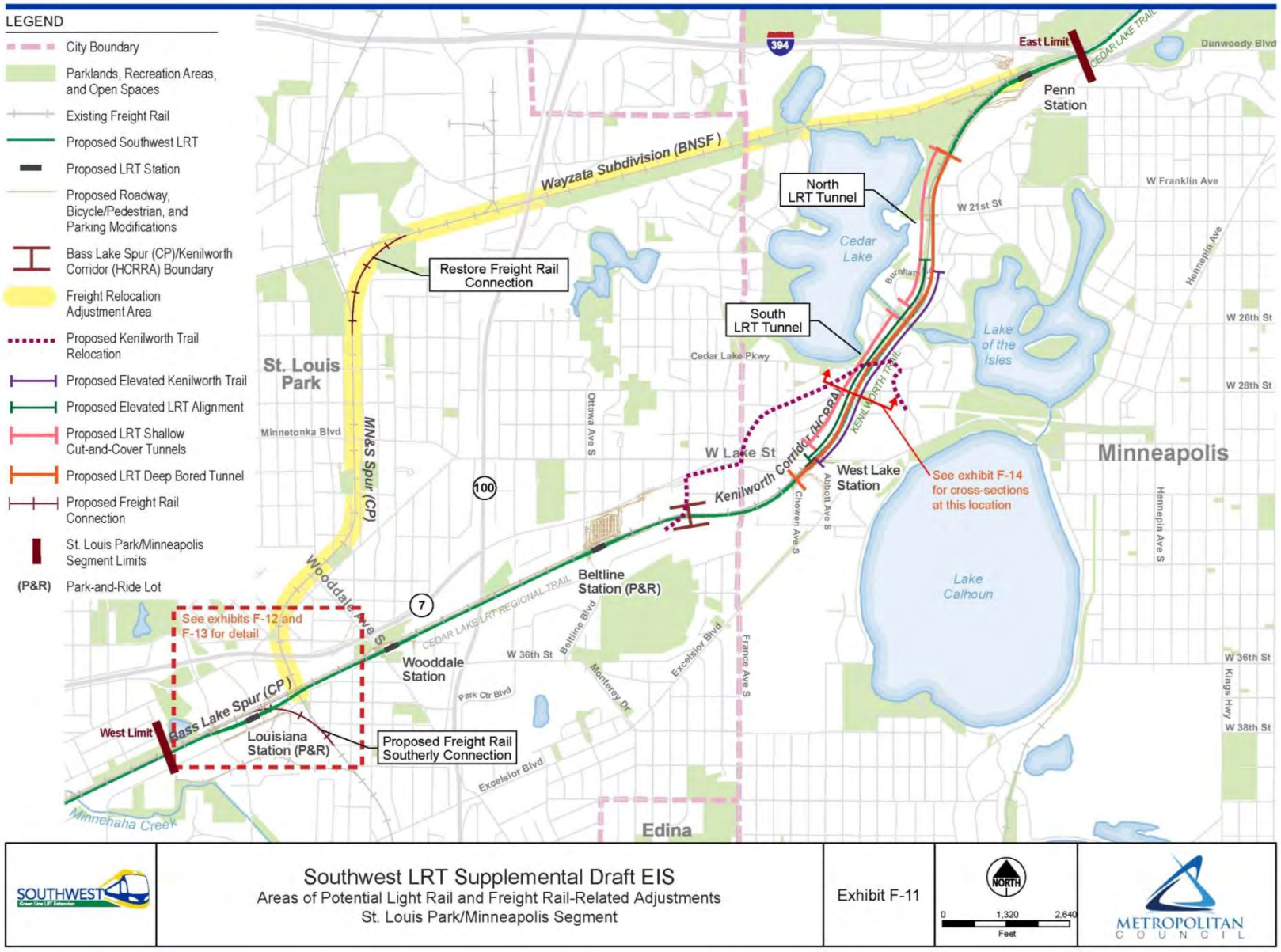
- **Set 1 Freight Rail Relocation Adjustments**
  - Brunswick West – Elevated - the relocation of freight rail to the MN&S Spur and Wayzata Subdivision primarily above-grade and on new right-of-way between Bass Lake Spur and 33rd Street
  - Brunswick Central – Elevated - the relocation of freight rail to the MN&S Spur and Wayzata Subdivision primarily above-grade, slightly east of Brunswick Central between Bass Lake Spur and 33rd Street
- **Set 1 Kenilworth Corridor Adjustments**
  - All Modes at Grade—light rail, freight rail, and trails at-grade through Kenilworth Corridor
  - Relocate the Kenilworth Trail out of the Kenilworth Corridor—the relocation of the Kenilworth Trail between the Midtown Greenway and Cedar Lake Parkway
  - Elevate the Kenilworth Trail—the placement of the Kenilworth trail on structure above the light rail alignment, east of the West Lake Street bridge to north side of Burnham Road bridge
  - Elevate the Light Rail Alignment—the placement of proposed light rail alignment on an elevated structure in the Kenilworth Corridor, east of the West Lake Street bridge to north side of Burnham Road bridge
  - Place the Light Rail Alignment in Shallow Cut-and-Cover Tunnels—the placement of the proposed light rail alignment within two cut-and-cover tunnels (the south tunnel segment between north of the West Lake Street bridge and south of the Kenilworth Lagoon; the north tunnel segment between north of the Kenilworth Lagoon and approximately 1,000 feet north of 21st Street) and a light rail bridge over the Kenilworth Lagoon between the two tunnels
  - Place the Light Rail Alignment in Deep Bore Tunnels—the placement of the proposed light rail alignment within twin bored tunnels between west of West Lake Station and approximately 1,000 feet north of 21st Street, with West Lake Station below-grade

Set 1 Freight Rail Relocation Adjustments Considered in the First-Step Evaluation

During the Draft EIS public comment period, individuals, organizations, and jurisdictions expressed concerns with the proposed freight rail track connection in St. Louis Park that would allow for the relocation of freight rail out of the Kenilworth Corridor. In particular, TC&W, the existing freight rail operator in the Kenilworth Corridor, raised safety and operational concerns with the horizontal and vertical curvature of the proposed new connection between the Bass Lake Spur and the MN&S Spur, as well as insufficient lengths of straight track, based on their design standards for operating up to 120-car-unit trains. TC&W also noted that the proposed routing of their freight trains from the Bass Lake Spur and the Kenilworth Corridor to the MN&S Spur and the Wayzata Subdivision could adversely affect the railroad's operational costs due to track geometry, increased track distances, and operating environments.

EXHIBIT F-11

Areas of Potential Light Rail and Freight Rail-Related Adjustments – St. Louis Park/Minneapolis Segment



Based on those and other comments received on the Draft EIS, the project team developed a variety of design adjustments to allow for the relocation of freight rail service, while balancing two primary objectives: design the connection to meet the safety and operational design standards of the affected railroads; and maintain the adjusted freight rail alignment within the existing right-of-way as much as possible. This effort focused on adjustments to the potential freight rail connection between the Bass Lake and MN&S spurs and adjustments to the track alignment along the MN&S Spur to the reconstructed connection to the Wayzata Subdivision.

Step one of this design development and evaluation process utilized the public involvement, agency coordination, and freight rail coordination efforts described in Section 2.0 of this appendix. The process, which generally spanned from February to June 2013, used a systematic approach to the development and evaluation of design adjustments to the freight rail relocation design under LRT 3A that the Draft EIS was based on and that representatives of freight railroads objected to during the Draft EIS public comment period, specifically citing safety and railroad operations and economic concerns. The design of the adjustments that would have relocated freight rail from the Bass Lake Spur and the Kenilworth Corridor and onto the MN&S Spur and the Wayzata Subdivision changed through this systematic process of design development by project staff and review and comment on the revised design by others, including the representatives of the affected freight rails. The review of the draft designs by representatives of the affected freight railroads, especially related to design and operational safety, played a key role in the development of the freight rail relocation design adjustments. In general, that design development process for freight rail relocation adjustments went through the following steps before two potential design adjustments were identified as likely meeting the design and operational safety requirements of the affected railroads (which are described below and are termed the Brunswick West and Brunswick Central):

1. **Draft EIS MN&S**. The starting point for the freight rail relocation design adjustment process was the design of freight rail modifications described in the Draft EIS under LRT 3A. This design would have provided a northern connection between the Bass Lake Spur and the MN&S Spur via a new freight rail connection, allowing freight rail service to be rerouted from the Bass Lake Spur east of the MN&S Spur and the Kenilworth Corridor, onto the MN&S Spur and the Wayzata Subdivision. The design of that connection (see Appendix F of the Draft EIS) was found to have safety and operational concerns by representatives of the affected freight railroads. The safety concerns were based on freight rail alignment curves and grades. Out of the nine curves associated with the design, four had high compensated grades (between 1.6 and 1.8 percent) and one curve was sharper than 6 degrees. Based on the safety and operational issues raised, the Draft EIS MN&S design was dismissed from further consideration.
2. **MN&S Modified**. Project staff prepared a modified MN&S design, based on the design from the Draft EIS, with the following changes: all horizontal curves are adjusted to be less than or equal to 6 degrees, maximum compensated grades are 0.91 percent, the alignment crosses Highway 7 on a new freight rail bridge and the horizontal and vertical alignment in the vicinity of the existing Minnetonka Blvd. bridge is adjusted. Representatives from affected railroads noted that the reverse horizontal curves located immediately north of the Bass Lake Spur on the proposed relocation route would not provide sufficient tangent (i.e., straight) track length to allow for the safe operations of their trains and, while the design was an improvement over the Draft EIS MN&S design, the reverse curse would render the design unacceptable due to the potential for derailment of freight rail cars navigating the curves.
3. **Brunswick East.** Developed and evaluated concurrently with the Brunswick West – At Grade and the Brunswick Central – At Grade alignments, the Brunswick East design eliminated the reverse curves in the MN&S Modified design. Further, the design would extend the existing MN&S tangent alignment south, connecting to the Bass Lake Spur with a 4-degree curve with maximum compensated grades of 0.80 percent. The alignment would run on an earth retaining structure on the Bass Lake Spur, cross over TH 7 and Wooddale Avenue on bridge, run on earth retaining structure generally parallel to Brunswick Avenue, cross over Lake Street on bridge. This design was dismissed from further consideration for two key reasons: 1) representatives of the effected freight railroads expressed the same safety concerns expressed for the Draft EIS MN&S design, particularly the presence of reverse curves and inadequate tangent track length for the through movement on the MN&S that could lead to derailment of freight

trains; and 2) the design would potentially result in the displacement of approximately 55 residential properties, the Park Spanish Immersion School, and one commercial building.

4. **Brunswick West – At-Grade.** Developed and evaluated concurrently with the Brunswick East and the Brunswick Central – At Grade designs, the Brunswick West – At Grade design would connect to the MN&S tangent alignment south of Minnetonka Boulevard, introducing a 4 degree curve. It would also place a tangent section of track through the Orioles Stadium (a Section 4(f) property) and it would cross the north west corner of the Xcel substation, tying into the Bass Lake Spur near Louisiana Avenue South with a 4 degree curve. This design would include at-grade freight rail crossings of Library Lane and West Lake Street/Dakota Avenue South. This design was dismissed from further consideration due to safety concerns raised by the affected railroads due to the associated at-grade crossings and the additional horizontal and vertical curves that could lead to rail car decoupling and/or train derailments.
5. **Brunswick Central – At-Grade.** Developed and evaluated concurrently with the Brunswick East and the Brunswick West – At Grade designs, the Brunswick Central – At Grade design would connect to the existing MN&S tangent track alignment south of Minnetonka Boulevard, introducing a 4 degree curve that would cross Brunswick Avenue at grade and that would continue on tangent track crossing West Lake Street and Wooddale Avenue South at grade. This design was dismissed from further consideration due to safety concerns raised by the affected railroads due to the associated at-grade crossings and the additional horizontal and vertical curves that could lead to rail car decoupling and/or train derailments.
6. **Brunswick West (Elevated).** The Brunswick West – At Grade design was modified to place the freight rail alignment between Highway 7 and 33rd Street on an elevated profile with bridge and earth retaining structures, thereby eliminating the at-grade crossings of Library Lane and West Lake Street/Dakota Avenue South and minimizing the vertical curves. This modified design was found acceptable to representatives from the effected freight railroads and was advanced into the first step evaluation (its more detailed description follows).
7. **Brunswick Central (Elevated).** The Brunswick Central – At Grade design was modified to place the freight rail alignment between Highway 7 and 33rd Street on an elevated profile with bridge and earth retaining structures, thereby eliminating the at-grade crossings of Brunswick Avenue, West Lake Street and Wooddale Avenue South and minimizing the vertical curves. This modified design was found acceptable to representatives from the effected freight railroads from a geometric perspective and was advanced into the first step evaluation (its more detailed description follows).

The adjustments developed for the potential freight rail connection at the conclusion of the freight rail relocation design development process were termed Brunswick Central and Brunswick West (see Exhibits F-12 and F-13, respectively) and are described as follows:

- **Brunswick Central (Elevated).** The Brunswick Central freight rail relocation adjustment was developed to minimize impacts to commercial, residential, and public properties associated with the Brunswick West alignment. This design adjustment would shift the existing MN&S rail tracks to the east, south of Highway 7, replacing the current freight rail bridge over the Bass Lake Spur and realigning the MN&S Spur between Bass Lake Spur and 33rd Street on new railroad right-of-way elevated on bridge and earth retaining structures. Under the Brunswick Central design adjustment, the potential freight rail connection would be elevated to minimize the number of vertical curves and vertical grade changes and flatten horizontal curves needed to meet the railroad operator's operational and safety requirements. This design adjustment would require full or partial acquisition of approximately 32 residential, business, or public properties; two new structures over Highway 7; and a new freight rail structure over the MN&S Spur. Both Highway 7 and the frontage road would be lowered approximately five feet to provide the required vertical bridge clearance over Highway 7. This design adjustment would result in relocating the Park Spanish Immersion School playground, a property that would likely meet the qualifications for protection under Section 4(f). Under this design adjustment, all freight rail street

EXHIBIT F-12
Brunswick Central - Elevated Freight Rail Relocation Adjustments

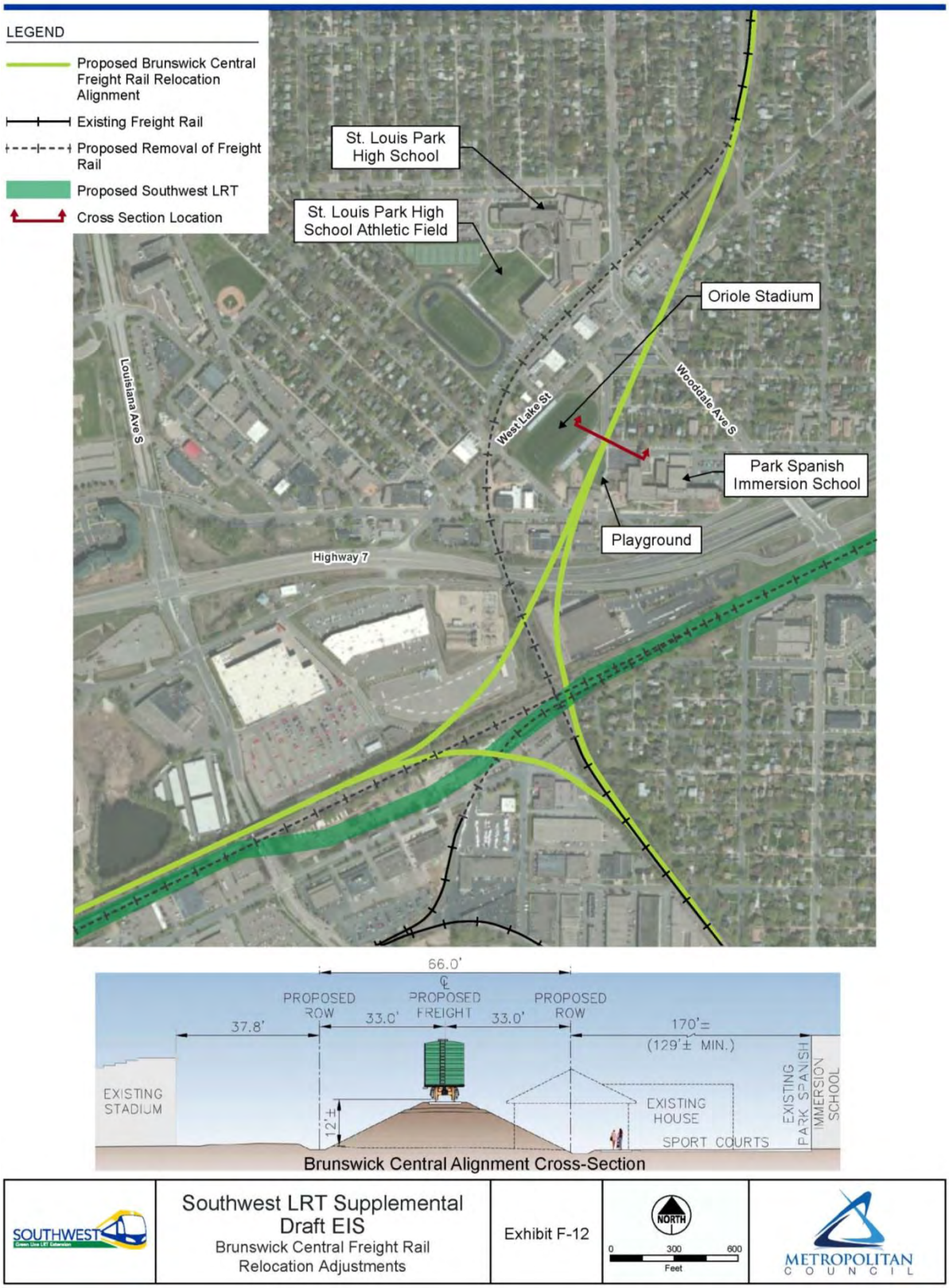
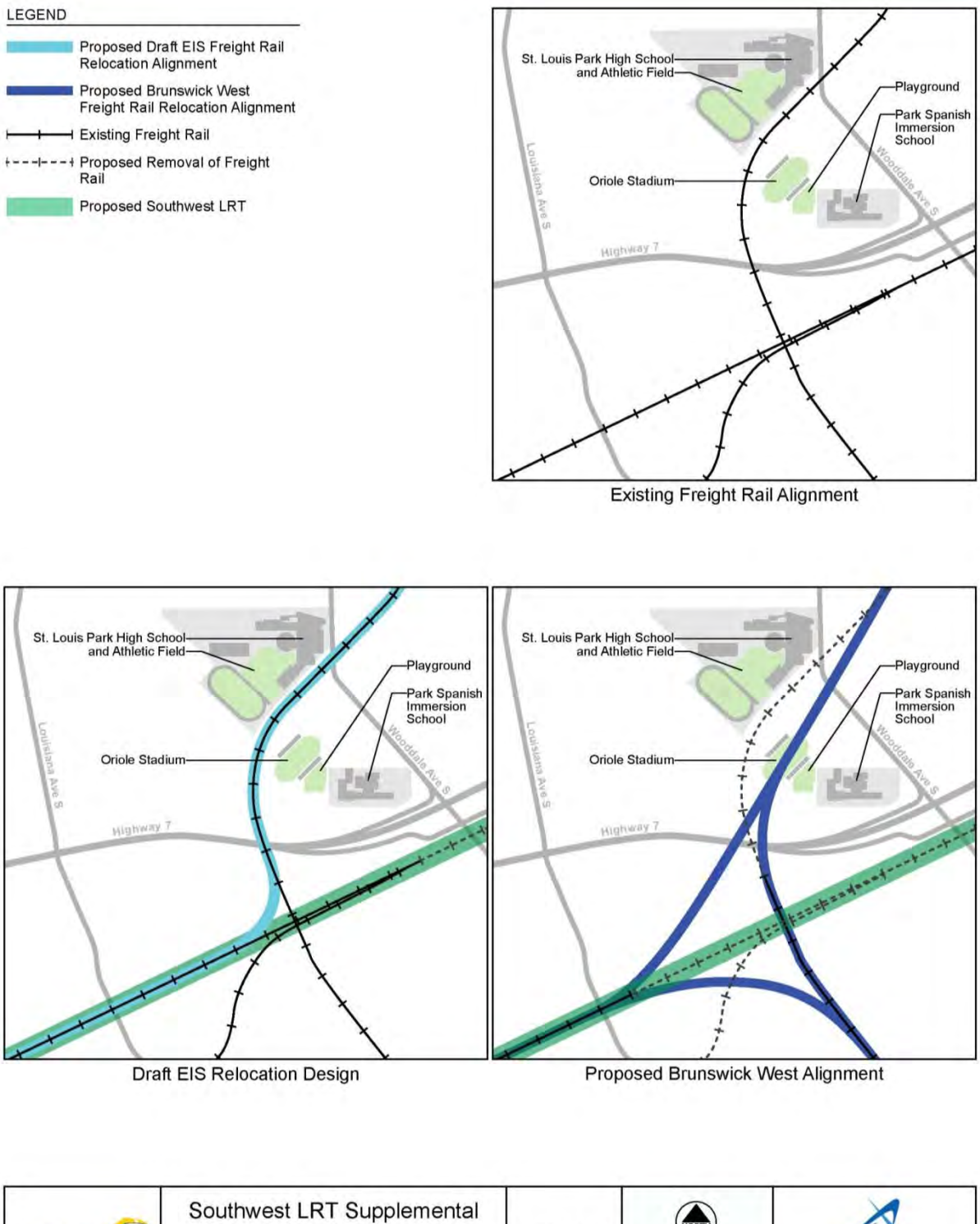


EXHIBIT F-13
Draft EIS and Brunswick West Freight Rail Relocation Adjustments



crossings would be grade-separated, except for an at-grade crossing at 28th Street. Underpasses would allow the Spanish Immersion School to retain access to Oriole Field and would provide vehicle, bicycle, and pedestrian access at other locations where the freight alignment would be elevated on retained fill (which is the construction of retaining walls to support fill where tracks are raised above existing grade). New freight rail bridges would be constructed over, Wooddale Avenue, 34th Street, and Lake Street. The modified freight rail alignment would generally meet up with the existing MN&S Spur alignment east of Brunswick Avenue South, in the vicinity of West 32nd Street, with relatively minor modifications to the existing tracks. Those modifications would be to the elevation of the existing freight rail tracks to accommodate the connection between the new and existing alignment. Finally, there would be a restored freight rail connection made between the MN&S Spur and the Wayzata Subdivision, as illustrated in Appendix G, Conceptual Engineering Drawings, of the Draft EIS.

- **Brunswick West (Elevated).** The Brunswick West freight rail relocation adjustment would provide a freight rail connection between the Bass Lake and MN&S spurs that would meet the freight rail operators' design and safety standards for horizontal and vertical track curvature. The vertical profile of this alignment would require the freight rail track to be elevated between the Bass Lake Spur and approximately 33rd Street on bridge and earth retaining structures. However, the design adjustment would require full or partial acquisition of approximately 46 residential, business, or public properties; construction of freight rail bridge structures; lowering of the south frontage road at Highway 7; and reconfiguration of several local roads that would be severed due to the adjusted freight rail alignment. The Brunswick West freight rail relocation adjustment would realign and re-establish the MN&S tracks between the Bass Lake Spur and 33rd Street on a new freight rail right-of-way. The alignment would also include realignment of the MN&S Spur to the south of the Bass Lake Spur. It also would displace Oriole Stadium, which serves as St. Louis Park High School's football field and as a community recreation facility and most likely would meet the qualifications for a Section 4(f)-protected property. The Brunswick West alignment would also close through access at Walker Street/Library Lane and would realign Lake Street from Walker Street to Dakota Avenue. It would also require additional roadway modifications to continue to provide vehicular access to the high school's athletic field. The modified freight rail alignment would generally meet up with the existing MN&S Spur alignment east of Brunswick Avenue South, in the vicinity of West 32nd Street, with relatively minor modifications to the existing tracks. Those modifications would be to the elevation of the existing freight rail tracks to accommodate the connection between the new and existing alignment. Finally, there would be a restored freight rail connection made between the MN&S Spur and the Wayzata Subdivision, as illustrated in Appendix G, Conceptual Engineering Drawings, of the Draft EIS.

Set 1 Kenilworth Corridor Adjustments Considered in the First-Step Evaluation

Concurrent with the potential freight rail relocation adjustment process, the project team reviewed comments submitted on the Draft EIS and advanced design activities to identify adjustments that would allow freight rail to continue operations in the Kenilworth Corridor.

As described in the Draft EIS, under LRT 3A-1, TC&W trains would not have been rerouted from the Kenilworth Corridor to the MN&S Spur and Wayzata Subdivision. Instead, the proposed double-tracked light rail alignment would be located adjacent to the existing Bass Lake Spur until entering the Kenilworth Corridor, where the light rail alignment would run parallel to the current single freight rail track and the Kenilworth Trail. Based on the conceptual design at the time, the Draft EIS analysis reflected a 94-foot cross section for LRT 3A-1 in the Kenilworth Corridor. Because of the limited width of the existing HCRRA-owned Kenilworth Corridor right-of-way at several locations, LRT 3A-1 would have resulted in the acquisition of approximately 55 residential and two commercial properties. Responding to a wide variety of comments on the Draft EIS, the project team developed and evaluated a range of design adjustments to the LRT 3A-1 that would allow for freight rail service to be retained within the Kenilworth Corridor along with the proposed light rail alignment and related improvements.

The project team developed and evaluated five potential design adjustments in addition to advancing the conceptual design of LRT3A-1 from the Draft EIS that would have placed the freight rail, light rail, and trail

alignments at-grade throughout the Kenilworth Corridor.[3] The six potential design adjustments developed and evaluated for the Kenilworth Corridor, that would retain freight rail within the corridor, are briefly described below, and are illustrated on Exhibits F-11 and F-14 of the Supplemental Draft EIS:

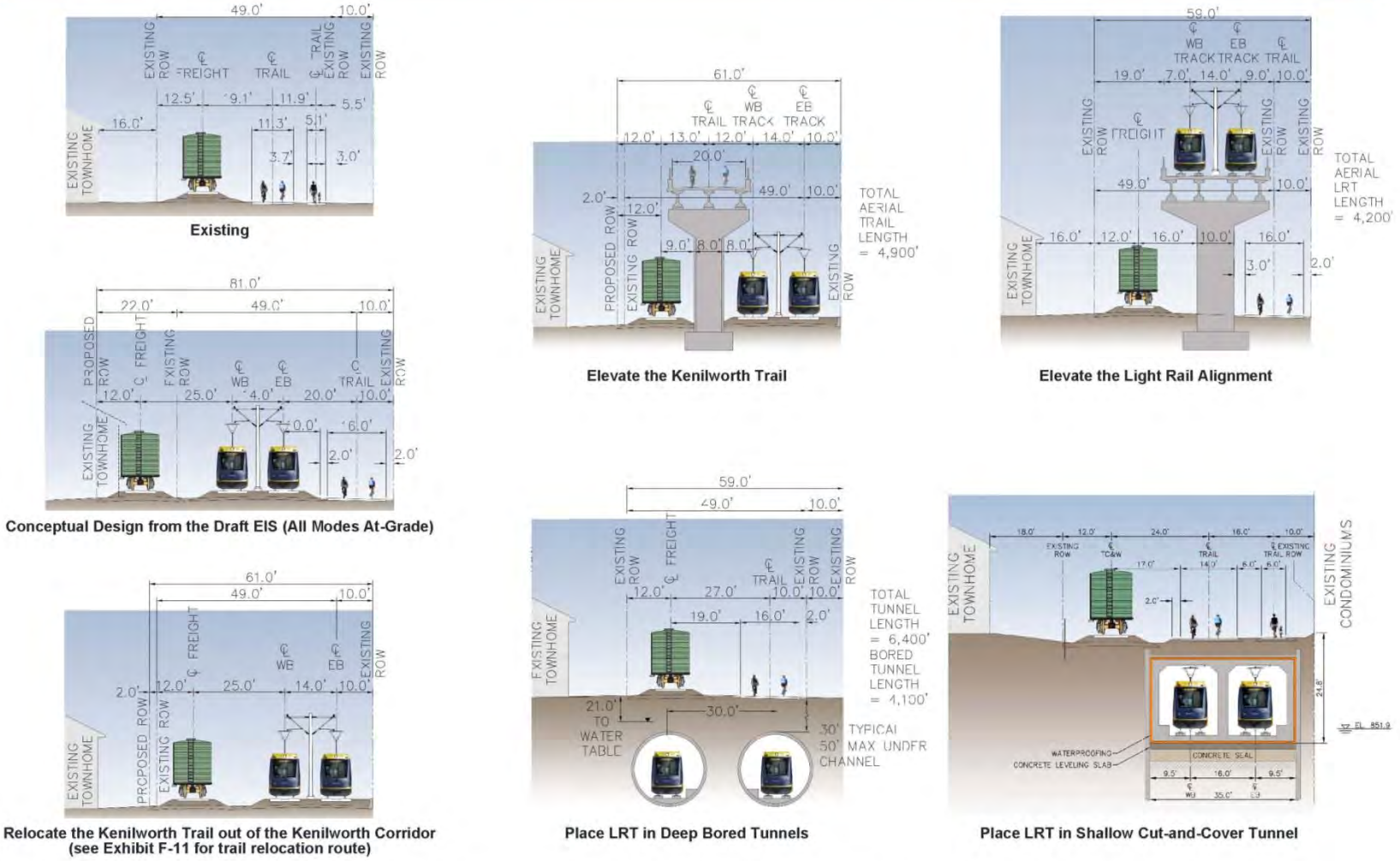
- **All Modes at-Grade.** As previously noted, the conceptual design of LRT 3A-1 in the Draft EIS would have placed the existing freight rail and Kenilworth Trail alignments and the proposed light rail alignment at-grade within the Kenilworth Corridor. The cross section of this design was adjusted based on additional information from the railroad operator[4] and on consideration of the potential acquisition of BNSF-owned right-of-way located immediately west of the Kenilworth Corridor. The adjusted typical cross section for this placing all modes at-grade within the Kenilworth Corridor would require 81 feet of right-of-way and would have required full acquisition of approximately 26 residential properties.
- **Relocate the Kenilworth Trail out of the Kenilworth Corridor.** This potential adjustment would generally require a typical cross-section width of approximately 61 feet for the existing freight and proposed light rail alignments. In summary, this design adjustment would avoid full residential property acquisitions but would likely require some partial property acquisitions and the construction of a new trail route from Inglewood Avenue South to Cedar Lake Parkway, including at-grade crossing or trail overpass structures over Highway 25 and France Avenue.
- **Elevate the Kenilworth Trail.** This potential adjustment generally requires a typical cross-section width of approximately 61 feet. The trail structure would be south of and parallel to the existing right-of-way north of West Lake Street and south of Burnham Road. At these locations, the trail would be elevated on retained fill, transitioning to bridge structure across the freight rail and light rail alignments. The trail would be elevated approximately 30 feet above-grade, with a 20-foot-wide trail surface supported by eight-foot-wide piers. This option would not require any full residential property acquisitions, but it would require the construction of an elevated trail structure, including an ADA-accessible connection to Cedar Lake Parkway.
- **Elevate the Light Rail Alignment.** This potential adjustment would require a typical cross section of approximately 59 feet. The proposed light rail structure would be approximately 3,000 feet long with 10-foot-wide bridge piers. Generally, the light rail structure would be located between the Midtown Greenway and Burnham Road and would be approximately 35 feet high. This design adjustment would not result in any full residential property acquisitions.
- **Shallow LRT Tunnels – Over Kenilworth Lagoon.** This potential adjustment would result in a typical cross section of approximately 62 feet for the at-grade freight rail and trail alignments where the double-tracked light rail alignment would be within the two tunnels. The two light rail tunnels would generally be within the Kenilworth Corridor (with some relatively minor exceptions, illustrated in Appendix G, Conceptual Engineering Drawings). In general, the tunnels would be located under the reconstructed Kenilworth Trail (Exhibit F-14 illustrates a typical cross section), with depth of cover ranging from 6 feet to 8 feet. Exhibit F-15 A/B illustrates the general construction sequence that would be used to construct the LRT tunnels using a cut-and-cover construction technique. The south light rail tunnel would extend approximately 2,200 feet from just north of West Lake Street to approximately 400 feet south of the Kenilworth Lagoon, which is a constructed channel connecting Lake of the Isles to Cedar Lake. The light rail alignment would rise back to grade to cross the lagoon on a new bridge with approximately the same vertical clearance over the lagoon as is provided today under the existing freight rail and

[3] A single-track light rail alignment within the most constrained sections of the Kenilworth Corridor was considered and dismissed due to unacceptable constraints that it would place on operating light rail service in the Southwest and Central corridors.

[4] These adjustments were unable to achieve a 25-foot clearance envelope between the centerline of the freight track and the right-of-way line. TC&W reviewed their existing operating clearance envelope within the Kenilworth Corridor, which is a minimum of 12 feet. TC&W has indicated that the existing operating clearance is acceptable.

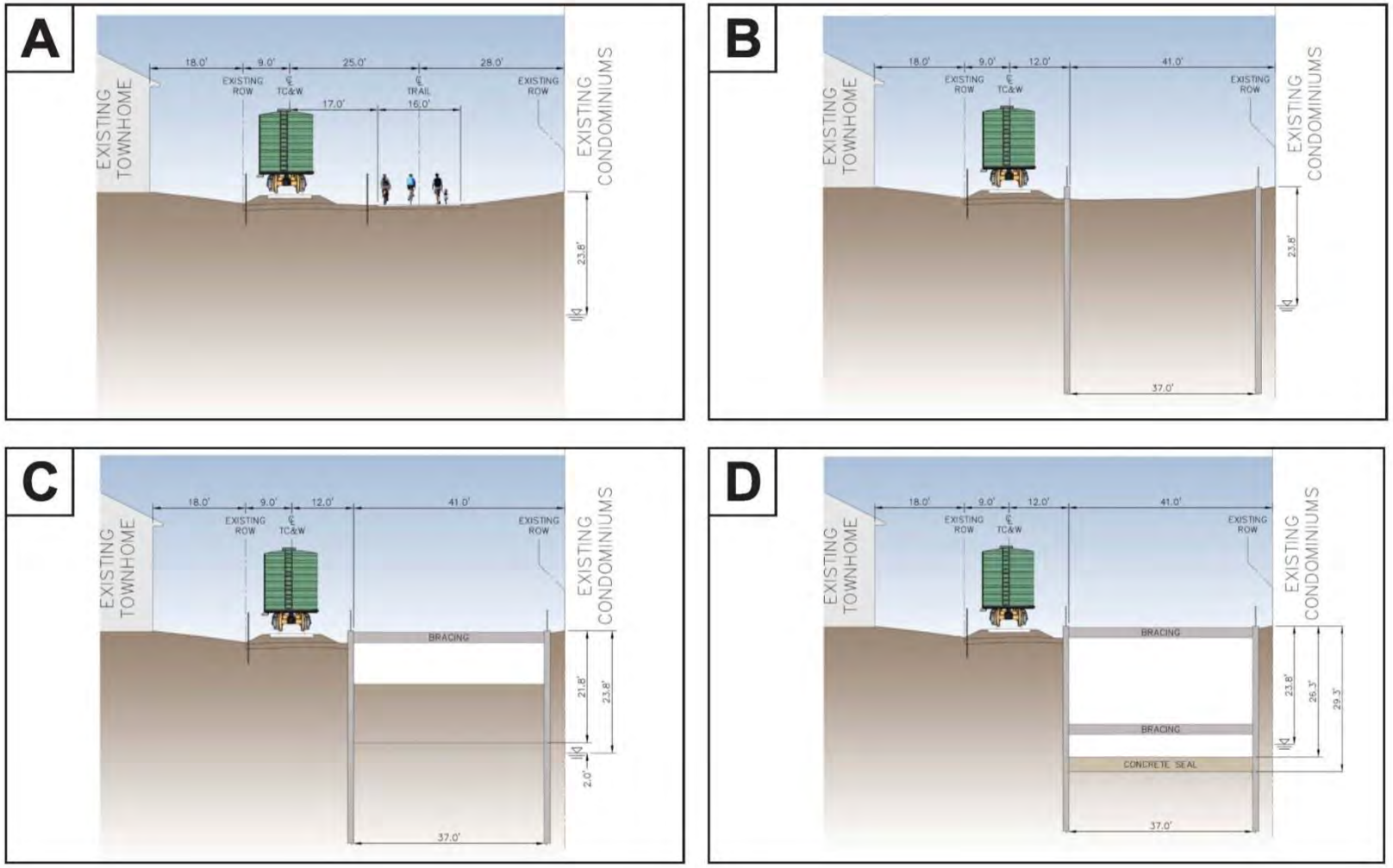
EXHIBIT F-14

Kenilworth Corridor Adjustments Considered



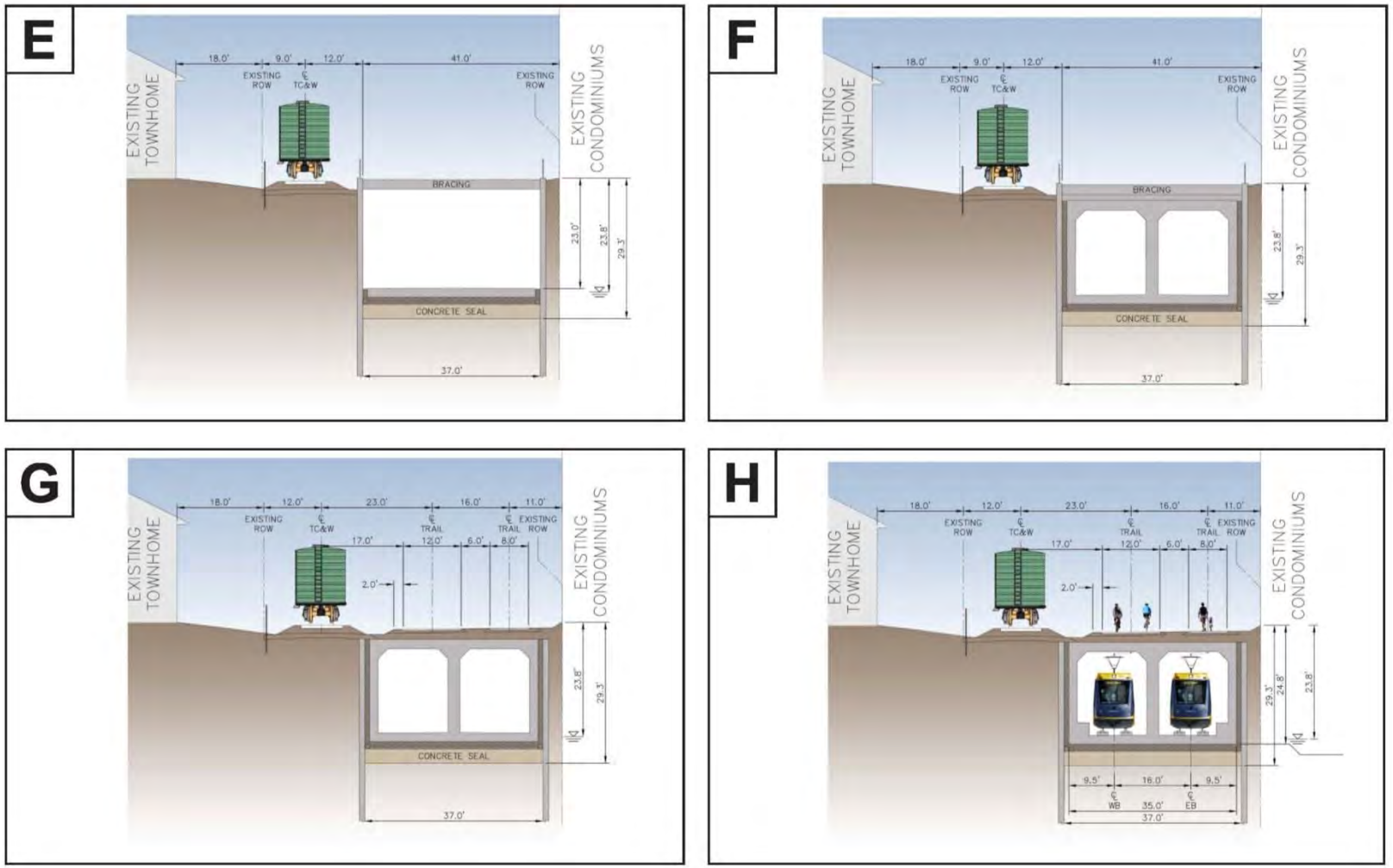
SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Kenilworth Corridor Adjustments Considered	Exhibit F-14		METROPOLITAN COUNCIL

EXHIBIT F-15A
Shallow LRT Tunnel Typical Construction Sequence



SOUTHWEST	Southwest LRT Supplemental Draft EIS Shallow LRT Tunnel Typical Construction Sequence St. Louis Park/Minneapolis Segment	Exhibit F-15A	METROPOLITAN COUNCIL

EXHIBIT F-15B
Shallow LRT Tunnel Typical Construction Sequence



SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Shallow LRT Tunnel Typical Construction Sequence St. Louis Park/Minneapolis Segment	Exhibit F-15B	METROPOLITAN COUNCIL

Bicycle and pedestrian trail bridges. After crossing the lagoon, the light rail alignment would descend and enter the north tunnel approximately 600 feet north of the lagoon. The north light rail tunnel would extend for approximately 2,500 feet, rising back to the surface approximately 1,000 feet north of 21st Street. Due to the relatively high cost of a tunnel station construction and the relatively low ridership projected at the proposed 21st Street Station, the design refinement eliminated the station. Each end of the two tunnels would include portal areas that would span approximately 300 to 500 feet, which would provide for the transition between the at-grade and tunnel alignments. Fencing and other facilities would protect the tunnel portals from unauthorized entry. This design adjustment would not result in any full residential property acquisitions.

- **Deep Bore LRT Tunnels**. Under this potential design adjustment, a portion of the proposed light rail alignment in the Kenilworth Corridor would be in two parallel tunnels that would be approximately 30 to 50 feet deep. The two parallel tunnels would be constructed using boring machines and each tunnel would be approximately 5,900 feet long. The tunnels' south portal would be north of West Lake Street and the north portal would be approximately 1,000 feet north of 21st Street. Each of the two light rail tunnels would be approximately 20 feet in diameter, with the depth of cover ranging from 30 feet at the West Lake Station to approximately 50 feet where the tunnels would cross under the Kenilworth Lagoon (30 feet from the Kenilworth Lagoon water surface elevation). This potential design adjustment would require a typical cross section in the Kenilworth Corridor of 59 feet to accommodate the at-grade freight rail and trail alignments where the light rail alignment would be within the two parallel tunnels. The deep bore tunnel would also require an underground station at West Lake Street,[5] as well as reconstruction of the existing West Lake Street bridge over the Kenilworth Corridor and the approaches to the bridge (generally between Market Plaza and Drew Avenue South).[6] Due to the relatively high cost of a tunnel station construction and the relatively low ridership projected at the proposed 21st Street Station, this design refinement would eliminate the 21st Street Station. This potential design adjustment would not require any full residential property acquisitions.

Conclusion of the First-Step Evaluation

During the first step of evaluation, the Council held public open houses during July 2013 to present the design adjustments developed to date and to receive comments on those potential adjustments. Primary concerns raised through that process included noise, visual effects on adjacent residences, and narrower distances between residential properties and proposed rail or light rail tracks. The design adjustments developed during the first-step evaluation were also reviewed by the CAC and BAC and were presented to the St. Louis Park and Minneapolis city councils and to the St. Louis Park School Board.

Based on the evaluation measures prepared for the first-step evaluation, provided in Tables F.5-2 and F.5-3, the public and agency comments received and the committee recommendations made, the range of potential freight rail relocation and Kenilworth Corridor adjustments were narrowed to the following for further study in the second-step evaluation:

- Freight Rail Relocation with Brunswick Central Alignment Adjustment
- Kenilworth Corridor Shallow LRT Tunnels
- Kenilworth Corridor Deep Bore LRT Tunnel

B. Second-Step Evaluation

Relatively minor changes were made to the potential design adjustments in the St. Louis Park/Minneapolis Segment during the second-step evaluation. For example, additional design detail was added or modified, in

[5] Under the Deep Bore LRT Tunnels adjustment, an at-grade station at West Lake Street would require the tunnel portal to be located north of the West Lake Street bridge, which would result in the acquisition and displacement of residential properties in this area.

[6] Due to various constraints (such as existing development on either side of the roadway and the conflict of existing bridge piers in relationship to the proposed tunnel), West Lake Street, generally between Market Plaza and Chowen Avenue South, would be closed to through traffic for approximately 12 to 18 months to allow for demolition of the existing bridge and approaches and for construction of the new bridge and approaches.

response to questions or requests from jurisdictions, to meet a specific design requirement or to avoid or minimize an identified adverse environmental impact. Additional elements were included in the designs, such as additional pedestrian access points under the Brunswick Central adjustment, and minor modifications to the location of crash walls between the proposed freight rail and light rail alignments and fencing details at the tunnel portals were added to the tunnel alignments.

The Council used the criteria and the measures reported in Table F.5-5 to evaluate the three potential freight rail-related design adjustments to the LPA. Based on the evaluation measures prepared for the second-step evaluation, the Deep Bore LRT Tunnel adjustment was dropped from the third-step evaluation, as recommended by the CMC. In summary, the Deep Bore LRT Tunnel adjustment was dismissed from further study based upon the following:

- Highest capital costs, which would likely be economically infeasible at the regional level
- Demolition and reconstruction of the existing West Lake Street bridge over the Kenilworth Corridor and approach spans to the bridge, generally between Market Plaza and Chowen Avenue South, which would require the closure of West Lake Street bridge and approach spans to the bridge for approximately 12 to 18 months, resulting in rerouting of approximately 26,500 vehicle trips per average weekday
- Walk access time to and from West Lake Station, which would be the highest ridership station, would increase by approximately one minute due to additional time to access below ground station, resulting in reduced transit ridership at that station
- Increased operating and maintenance costs associated with an underground West Lake Station
- Longer and deeper transition areas with retaining walls between the proposed at-grade light rail alignment and the two tunnel portals, which would lead to additional adverse impacts to visual quality and aesthetics in the Kenilworth Corridor
- Large construction staging areas and access pits at the two tunnel portals, which would generate noise and dust from construction equipment and trucks delivering supplies and removing spoils from the tunnel, and additional short-term adverse impacts to visual quality and aesthetics in the Kenilworth Corridor
- Reconstruction of the existing freight rail and light rail bridges across the Kenilworth Lagoon and the adverse effects of those construction activities would not be avoided
- Potential risk of settlement to existing buildings and other structures immediately adjacent to the deep bore tunnels

C. Third-Step Evaluation

The third step of evaluation involved the detailed comparison of the Freight Rail Relocation Brunswick Central and the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustments. Based on a recommendation adopted by the CMC in October 2013, the analysis concluded that the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustments would provide the best balance of costs, benefits, and environmental impacts, compared to the Freight Rail Relocation Brunswick Central adjustments. In summary, the advantage of the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustment is that it would avoid the various adverse impacts associated with the Freight Rail Relocation Brunswick Central design, including: additional capital costs; the full acquisition of approximately 32 residential, commercial, and institutional parcels; the use of the Park Spanish Immersion School playground; increased wetland impacts, and the adverse visual, neighborhood, and community cohesion impacts resulting from the construction of elevated freight rail track alignment and structures associated with the modified freight rail alignment in the vicinity of St. Louis Park High School. By comparison, the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustment would not result in the full acquisition of any residential, commercial, or institutional properties or displacement of residences or commercial/institutional buildings, or uses. The third-step evaluation measures are summarized in Table F.5-6. As a result of the third-step evaluation, the Freight Rail Relocation Brunswick

Central design adjustment was dismissed from further study and the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustment was advanced into the fourth-step evaluation (see Exhibit F-16).

D. Fourth-Step Evaluation

The fourth step of evaluation was initiated in October 2013 and involved three primary components: (1) preparation of the independently-prepared *SWLRT Engineering Evaluation of Freight Rail Relocation Alternatives* (TranSystems, 2014),[7] which identified the MN&S North design adjustment for further evaluation; (2) the development and evaluation of variations of the Shallow Cut-and-Cover Tunnels design adjustment; and (3) additional design adjustments reflected in a memorandum of understanding between the Council and the City of Minneapolis (see Appendix D, Sources and References Cited, for instructions on how to access the executed memorandum). Following is a description of the design concepts considered in the fourth-step evaluation and a summary of how they were evaluated by the Council.

Independent Engineering Evaluation of Freight Rail Relocation

The first component of the fourth step of evaluation was the independent study commissioned by the Council to provide an analysis of previously studied freight rail relocation designs that would provide for the rerouting of TC&W freight rail trains out of the Kenilworth Corridor and identification of any potential new design adjustments or concepts.[8] In particular, the study, which was performed by TranSystems, consisted of an analysis of the technical, safety, and operational considerations of eight options that would allow for the rerouting of TC&W freight trains that were developed in prior freight rail studies and two additional concepts developed by the Southwest LRT Project Office (SPO) during the first step of the four-step evaluation process. The scope of the analysis generally covered the following: identification of operational cost drivers; identification of community and other impacts; and assessment of possible operational adjustments.

The TranSystems analysis and report evaluated the following options for relocation of freight rail from the Kenilworth Corridor:

- Far Western Minnesota Connection – Appleton to Benson (Exhibit F-17)
- Western Minnesota Connection – Granite Falls to Willmar (Exhibit F-18)
- Chaska Cutoff (Exhibit F-19)
- Highway 169 Alignment to Burlington Northern Santa Fe (Exhibit F-20)
- Midtown Corridor (Exhibit F-21)
- United Transportation Route (Exhibit F-22)
- MN&S South Connection with Union Pacific (Exhibit F-23)
- MN&S North (Source: TranSystem's Concept) (Exhibit F-24)

The draft *SWLRT Engineering Evaluation of Freight Rail Relocation Alternatives* was issued by independently by TranSystems on January 30, 2014, which initiated a public comment period on the draft report. The public comment period extended through March 12, 2014 and it included town hall meetings on February 10 and 12, 2014.

Exhibits F-22 and F-23 from TranSystem's independent *SWLRT Engineering Evaluation of Freight Rail and Relocation Alternatives* report illustrate TranSystem's evaluation of the freight rail relocation designs. As represented in the exhibits, TranSystems conducted their evaluation within a two-tiered process. In summary, TranSystem's independent *SWLRT Engineering Evaluation of Freight Rail and Relocation Alternatives* report made the following recommendations:

[7] The report was funded by the Council and the Council submitted comments on the draft report during its public comment period. However, the report was independently prepared by TranSystems and the Council did not have editorial control over the report. See Appendix D for details on how to access the final report.

[8] The Council also commissioned an independent review of the project's prior groundwater studies in the Kenilworth Corridor related to the Shallow LRT Tunnels adjustments, documented in the *Southwest Light Rail Transit: Kenilworth Shallow LRT Tunnels Water Resources Evaluation* (Burns & McDonnell, 2014). See Appendix D for a link to the final report.

EXHIBIT F-16

Shallow LRT Tunnels – Over Kenilworth Lagoon Design Adjustments St. Louis Park/Minneapolis Segment

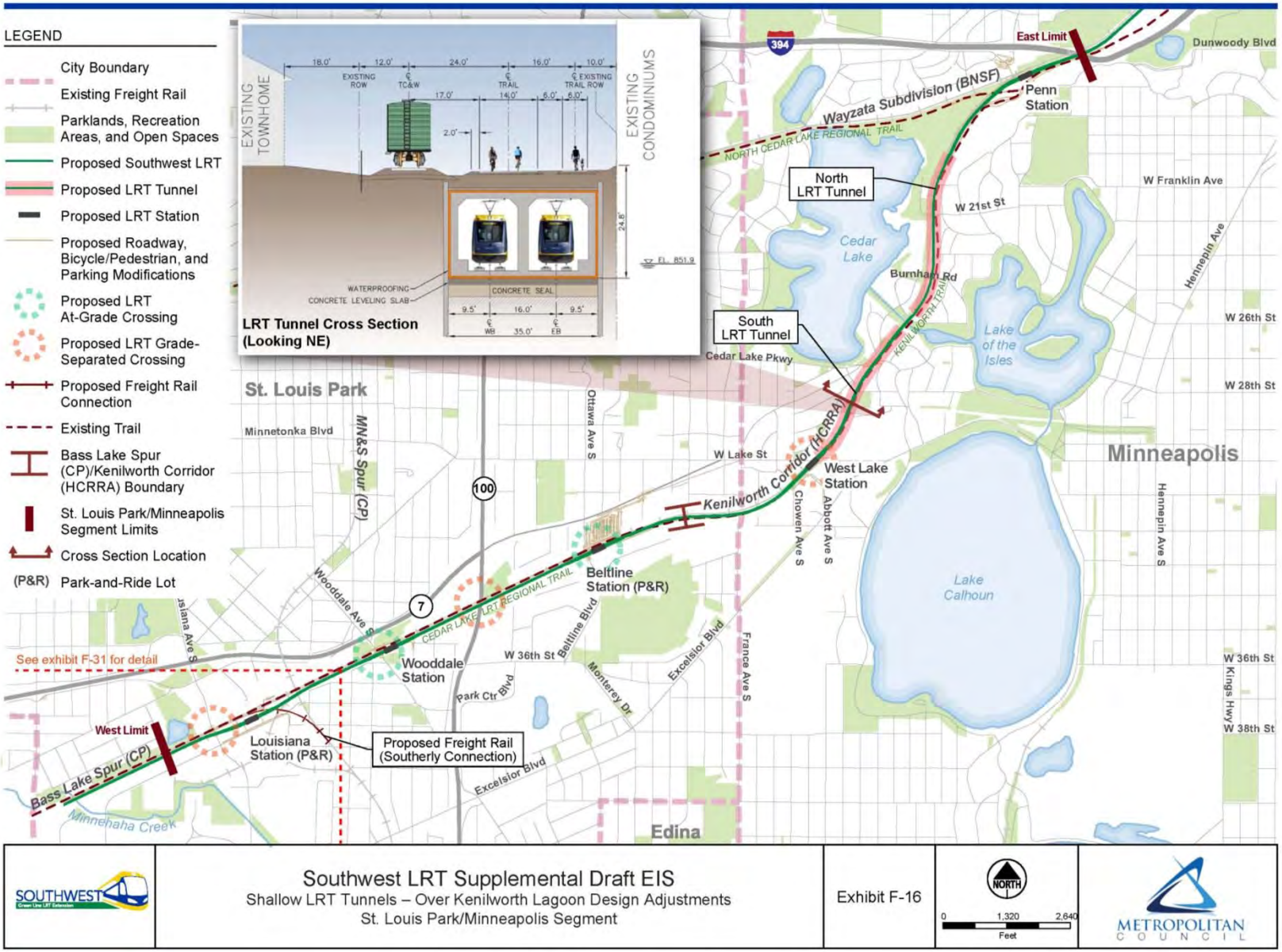


EXHIBIT F-17
Far Western Minnesota Connection – Appleton to Benson

Source: TranSystems; February 2014.

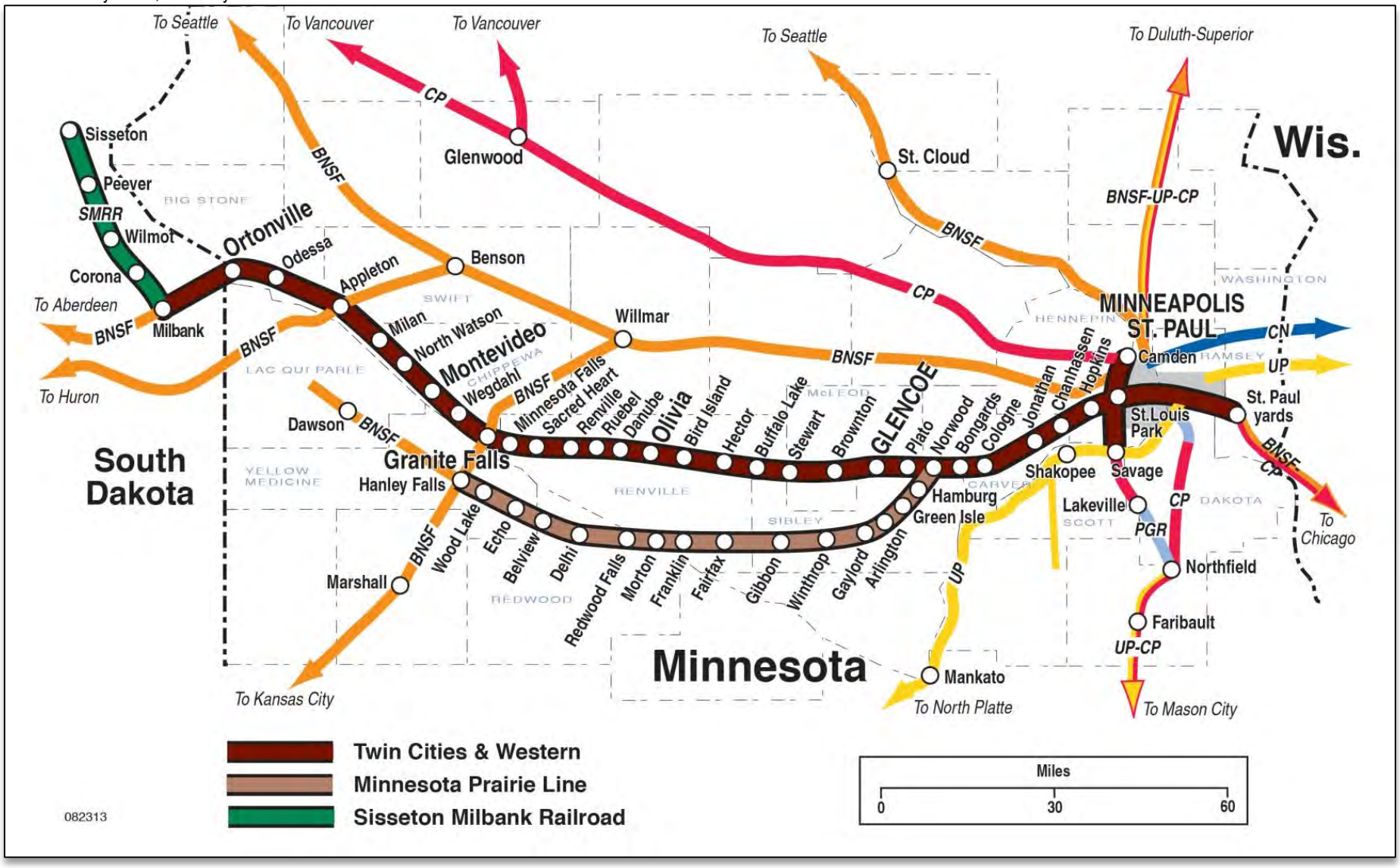


EXHIBIT F-18
Western Minnesota Connection – Granite Falls to Willmar
Source: TranSystems; February 2014.

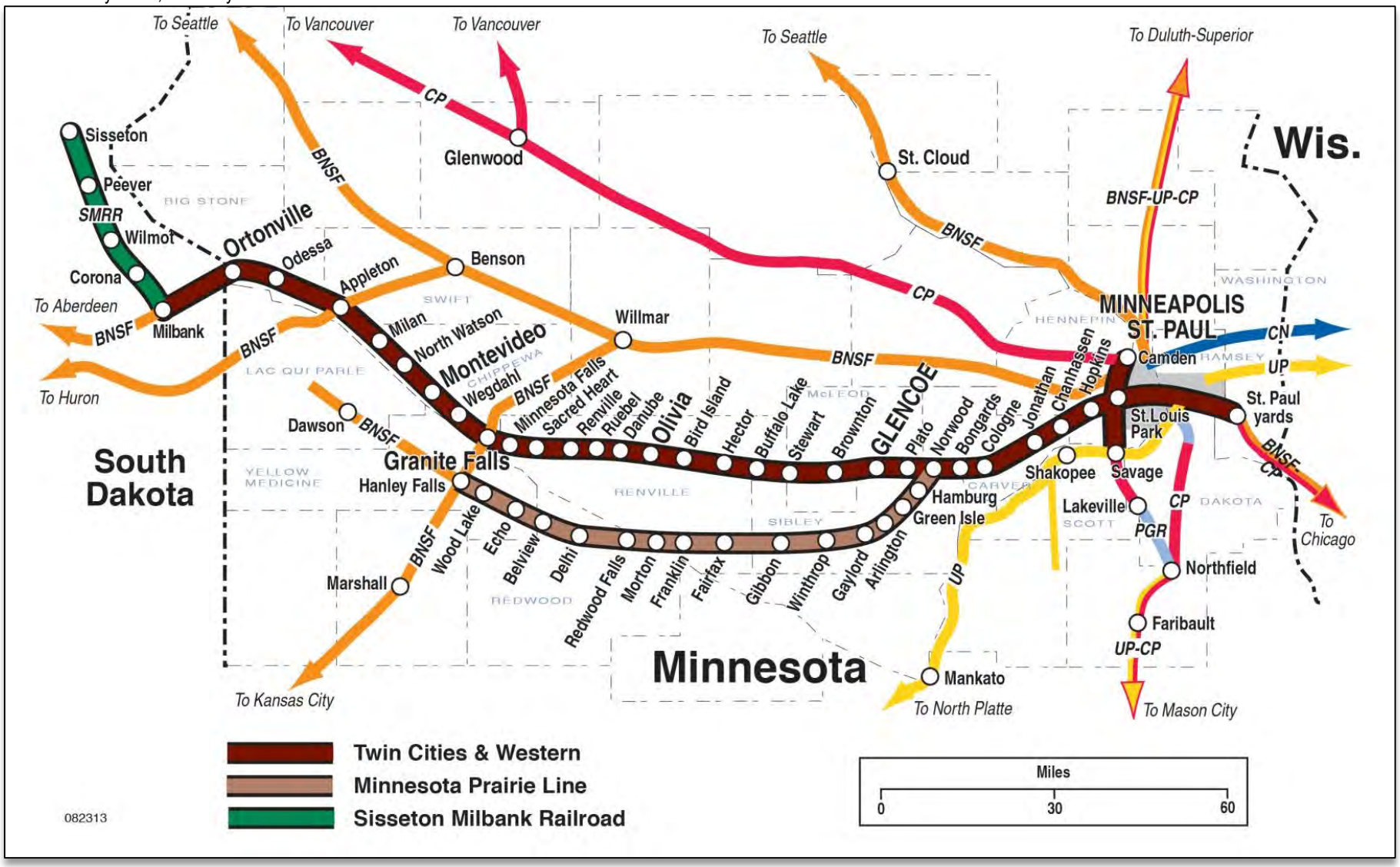


EXHIBIT F-19
Chaska Cutoff
Source: TranSystems; February 2014.

EXHIBIT F-20
Highway 169 Alignment to Burlington Northern Santa Fe
Source: TranSystems; February 2014.

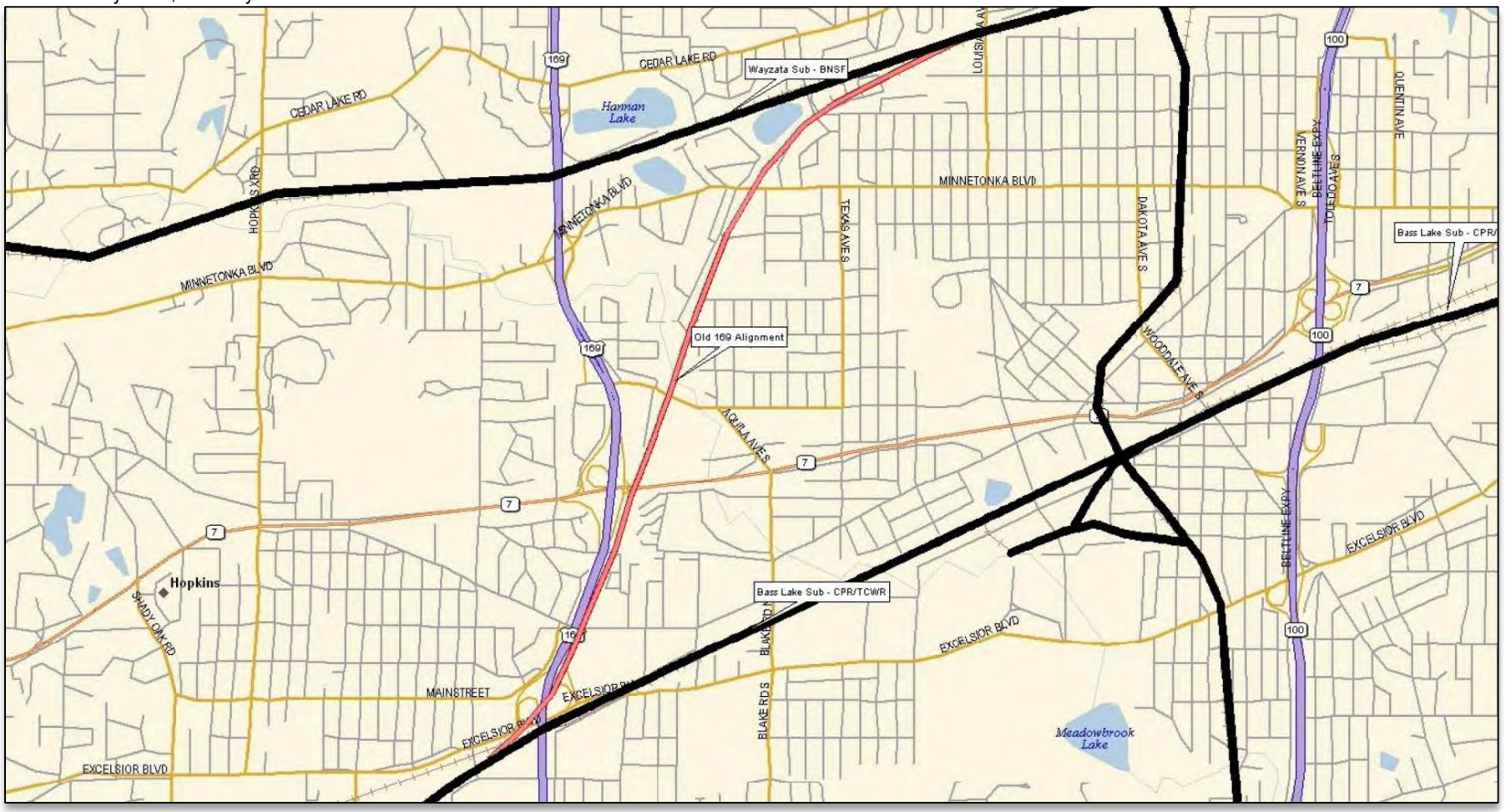


EXHIBIT F-21
Midtown Corridor
Source: TranSystems; February 2014.

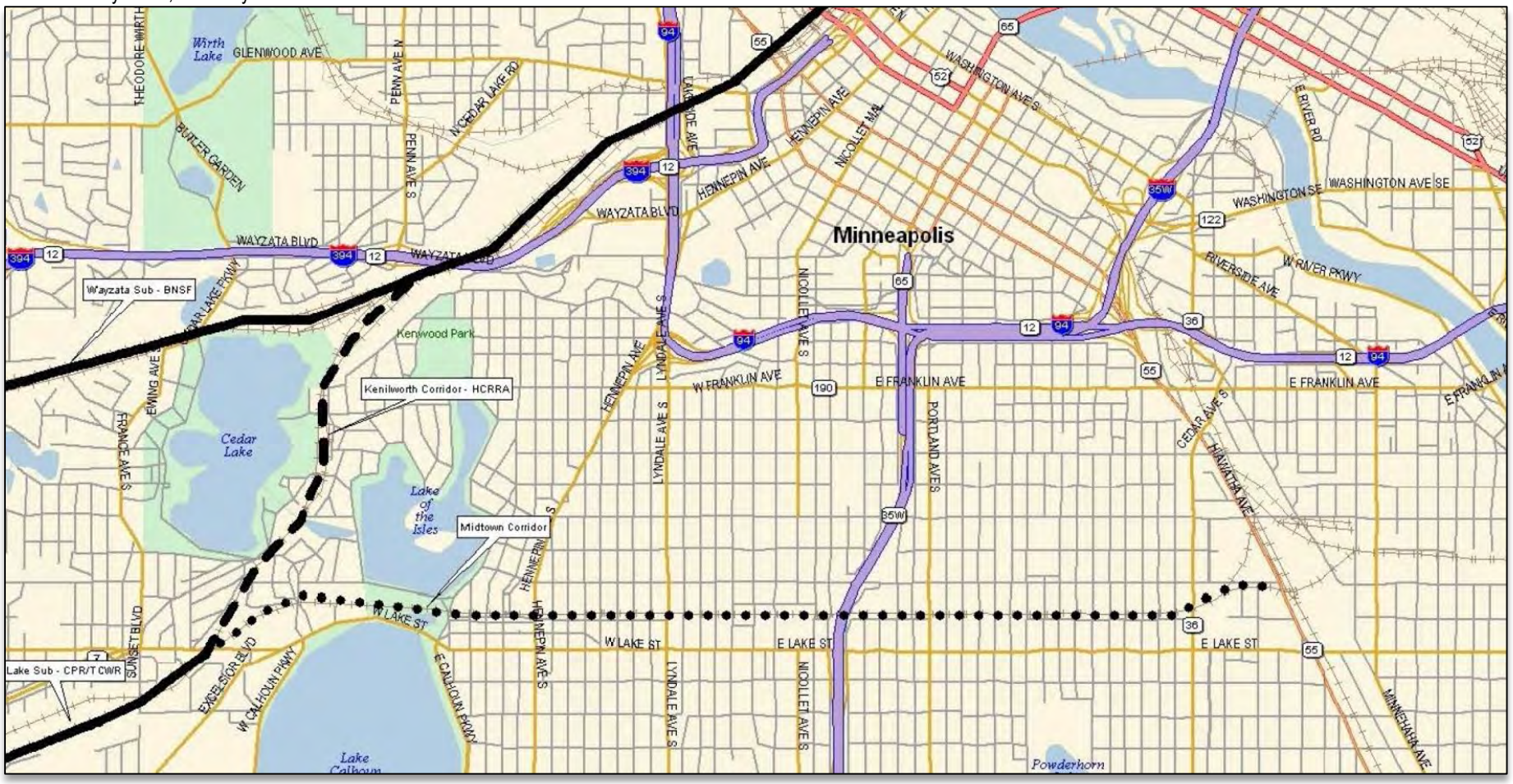


EXHIBIT F-22
United Transportation Union Route
Source: TranSystems; February 2014.

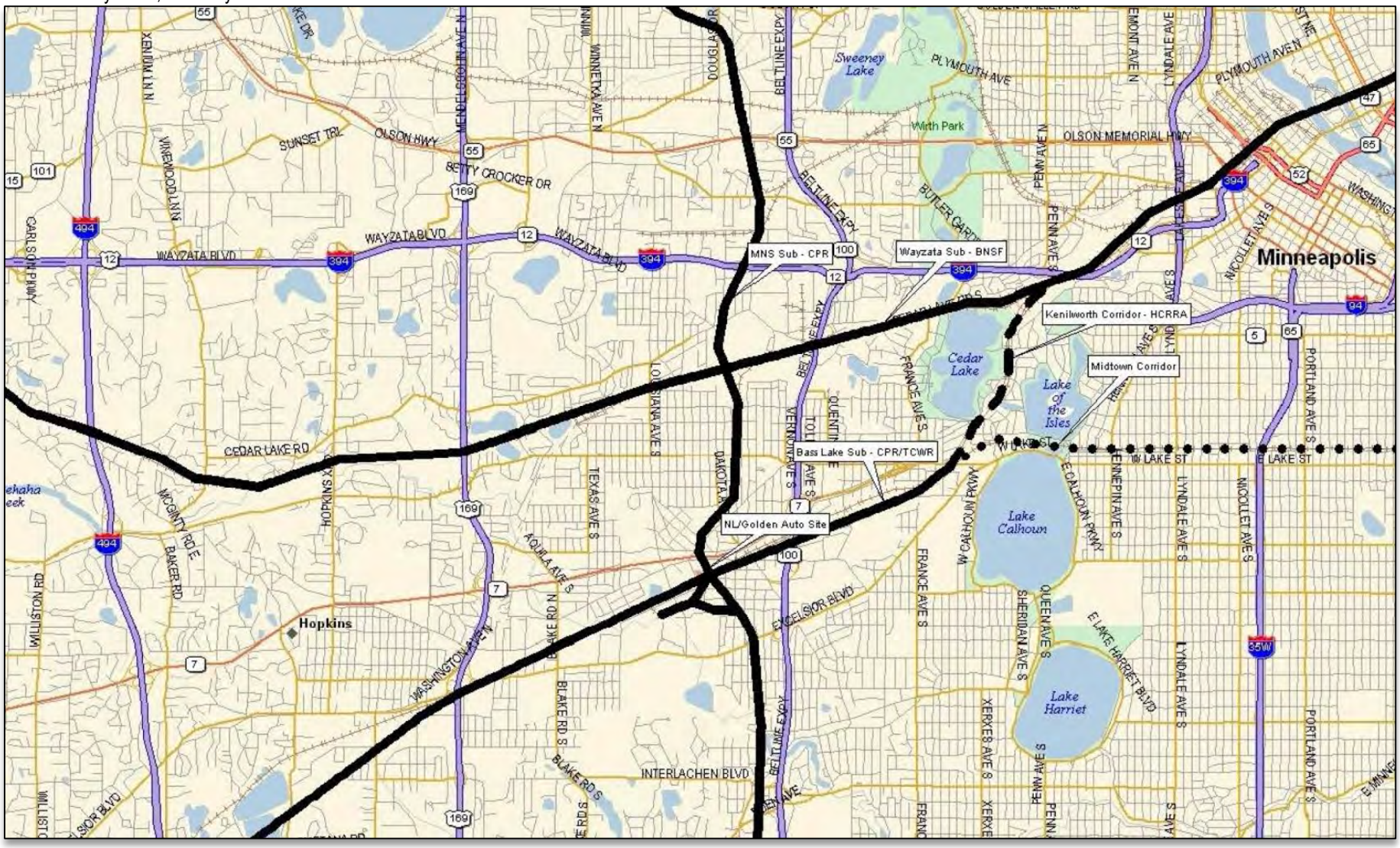


EXHIBIT F-23
MN&S South Connection with Union Pacific
Source: TranSystems; February 2014.

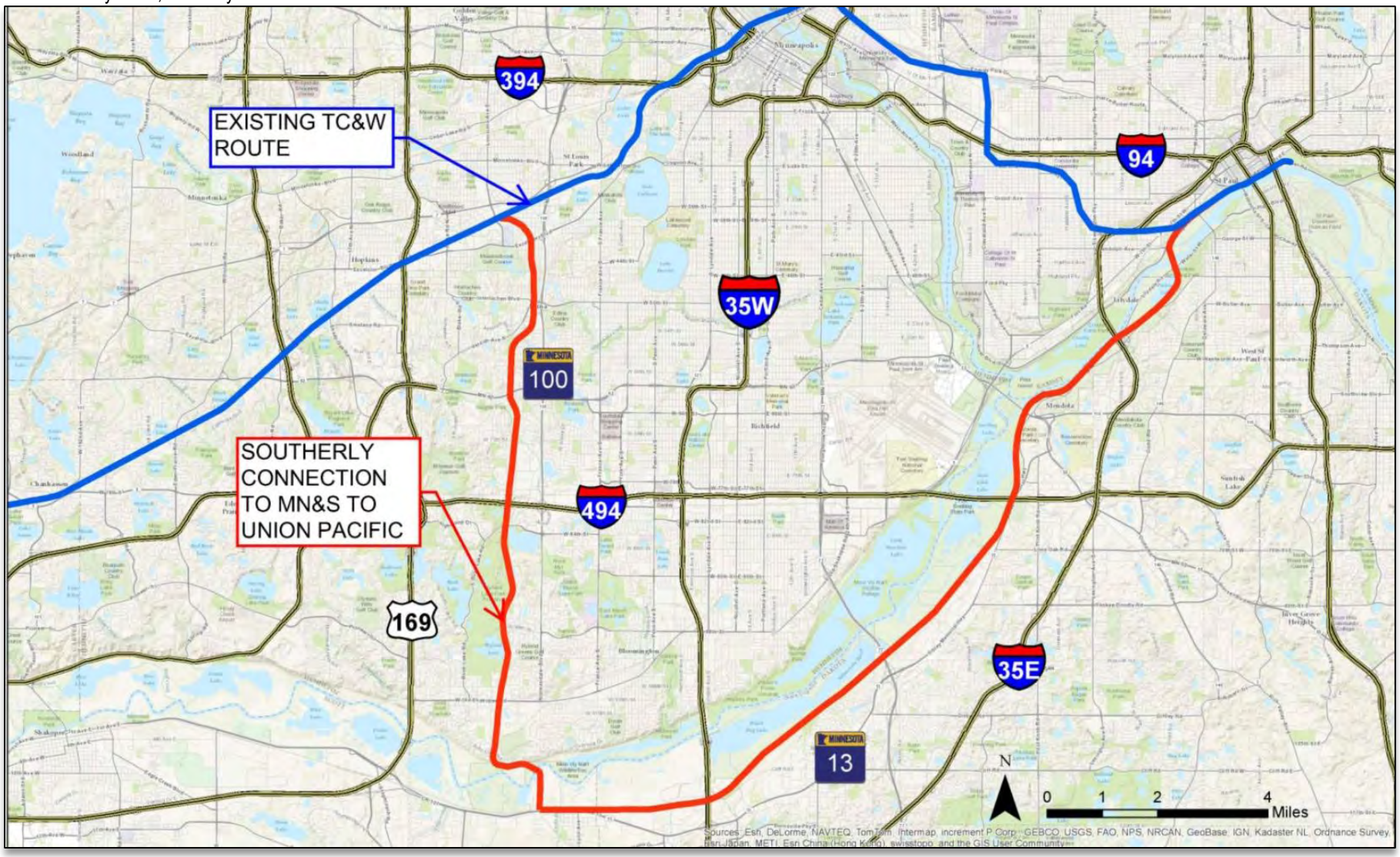
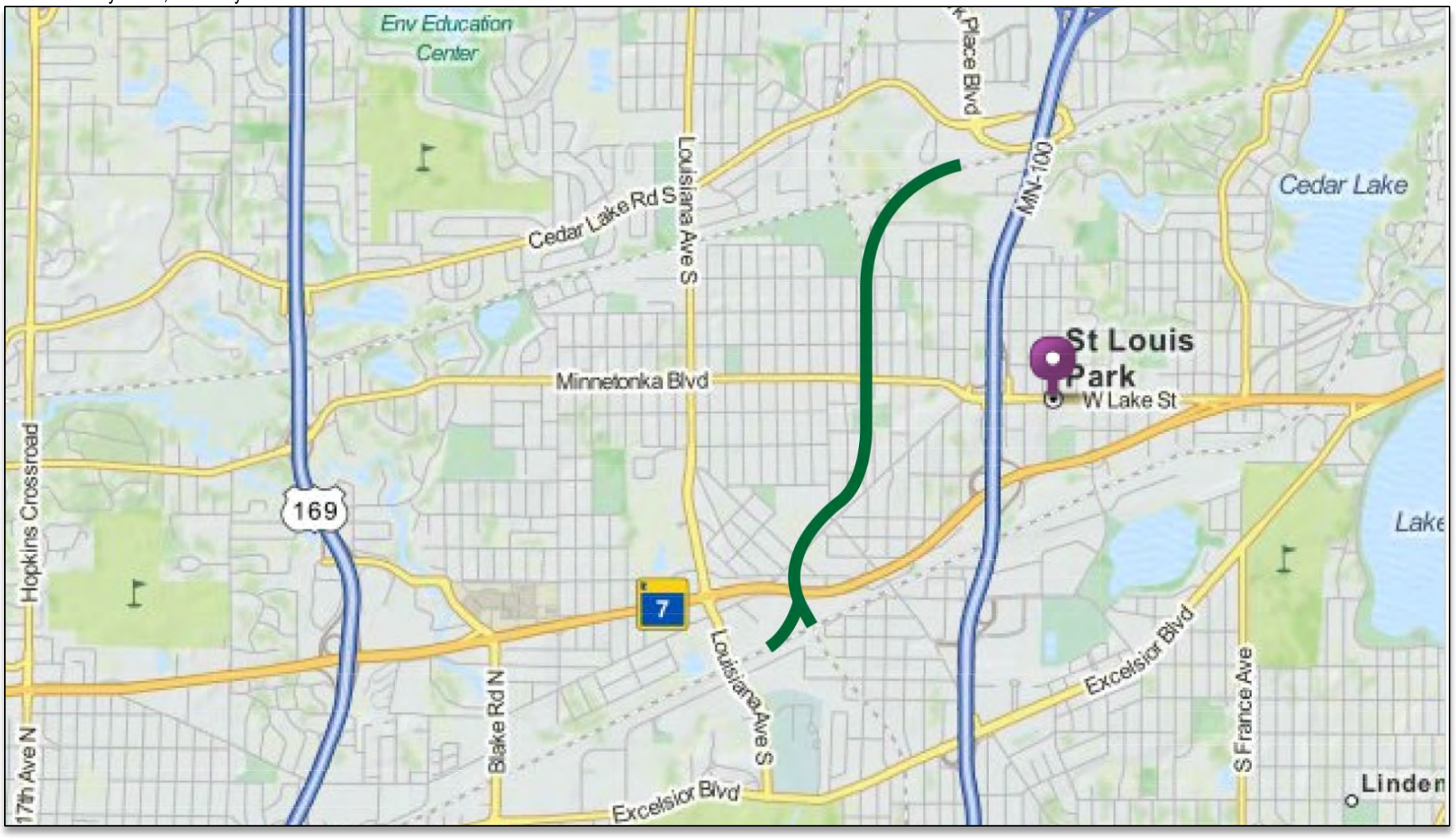


EXHIBIT F-24
MN&S North
Source: TranSystems; February 2014.



1. The study finds that five of the freight rail relocation options evaluated are "fatally flawed" for a variety of reasons, primarily related to an assessment showing that the affected freight rail operators would not find them acceptable due to economic, operations, or safety concerns. As such, the report does not recommend any additional study of those five options:
   - Far Western Minnesota Connection – Appleton to Benson (Exhibit F-17)
   - Western Minnesota Connection – Granite Falls to Willmar (Exhibit F-18)
   - Chaska Cutoff (Exhibit F-19)
   - Highway 169 Alignment to Burlington Northern Santa Fe (Exhibit F-20)
   - MN&S South Connection with Union Pacific (Exhibit F-23)
2. In addition, the independent report does not recommend further study of three other freight rail options that it evaluated, primarily due to significant impediments to their implementation. The final report finds that, while the Brunswick Central alignment was acceptable to the affected freight rail operator from an operational, economic, and safety perspective, it was dismissed from further study (in step three of the evaluation) due to its wide range of adverse impacts. The final report also finds that an option termed the MN&S South, which would connect the Bass Lake Spur south to the MN&S Spur, might be able to be designed to meet engineering standards, but that it "would face severe obstacles with respect to property acquisition and permitting..." (TranSystems, 2014; page 34). Finally, due to several identified implementation challenges, the report does not recommend further study of the Midtown Corridor. The identified challenges include: likely "significant" capital costs; the corridor is listed on the National Register of Historic Places and two bridges on the alignment are on park land; and it may "complicate or thwart plans for a streetcar in the corridor." (TranSystems, 2014; page 19)
3. TranSystems independent report concluded that a range of designs included within what it termed the Kenilworth Corridor – Co-Location (including the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustment) constituted a "viable route," warranting further development and study.[9]
4. The independent study by TranSystems also resulted in the identification of an additional freight rail relocation alignment in the vicinity of St. Louis Park High School that could potentially accommodate the relocation of freight rail from the Kenilworth Corridor to the MN&S Spur and the Wayzata Subdivision. The report recommends that this design adjustment receive further consideration by the Council. This freight rail modification design adjustment, which has many similarities to other options previously developed and considered by the Council, was termed the MN&S North design adjustment (see Exhibit F-24).

[9] The independent TranSystems final report also concluded that "above-ground options [in the Kenilworth Corridor] present an insurmountable engineering challenge." Further, the final report "defers to [others] to offer conclusions regarding the engineering for the shallow tunnel option." (*SWLRT Engineering Evaluation of Freight Rail and Relocation Alternatives* – TranSystems; March 2014; page 24).

EXHIBIT F-25
TranSystems Tier1 Screening Summary

Source: *SWLRT Engineering Evaluation of Freight Rail and Relocation Alternatives* – TranSystems; March 2014.

Proposed Freight Route	Operations	Commercial Considerations	Implementation Considerations
Kenilworth Corridor – No-build	○	○	●
Kenilworth Corridor – Co-location	○	○	◐
Far Western MN connection with BNSF (Appleton-Benson)	●	●	●
Western MN connection with BNSF (Granite Falls-Willmar)	●	●	●
Chaska Cut-off	◐	◐	●
Hwy 169 Alignment to BNSF	◐	◐	●
MN&S Spur North	◐	○	◐
UTU route	◐	○	●
MN&S Spur South	◐	◐	●
Midtown Corridor	○	○	●

○ Strongly supports goal ◐ Supports goal ● Does not support goal

EXHIBIT F-26
TranSystems Tier II Screening Summary
Source: *SWLRT Engineering Evaluation of Freight Rail and Relocation Alternatives* – TranSystems; March 2014.

Proposed Freight Route	Tier I Screening			Tier II Screening			
	Operations	Commercial	Implementation Obstacles	Engineering	Safety	Community	Cost
Kenilworth Corridor – Co-Location	○	○	◐	○	○	◐	$20 to $330 Million*
MN&S Spur North	◐	○	◐				
DEIS connection	The MN&S Spur North has various concepts for achieving the necessary rail connections which were assessed separately in Tier 2 Screening.			●	◐	◐	N/A
Modified MN&S Spur connection				●	◐	◐	N/A
Brunswick East connection				◐	◐	●	N/A
Brunswick West connection (at-grade and elevated)				◐	◐	●	N/A
Brunswick Central connection (at-grade and elevated)				◐	◐	●	N/A
TranSystems Alternate connection				○	○	◐	$220 to $240 Million

○ Strongly supports goal ◐ Supports goal ● Does not support goal

EXHIBIT F-27
MN&S North Freight Rail Relocation Adjustments

Following is a description of the MN&S North design adjustment:[10]

> **MN&S North.** The MN&S North freight rail relocation adjustment was developed to avoid or minimize the adverse impacts of the elevated and straightened freight rail alignment between Highway 7 and 34th Street and the adverse impacts to commercial, residential, and public properties associated with the Brunswick Central design adjustments. The MN&S North design adjustment would maintain the existing MN&S rail tracks south of Highway 7, including the current freight rail bridge over the Bass Lake Spur to a connection with the existing freight rail alignment between Library Lane and Dakota Avenue. Under the MN&S North design, the potential freight rail connection between the Bass Lake Spur and the MN&S Spur would begin with an elevated grade on bridge structure on the Bass Lake Spur west of Louisiana Avenue, with the freight rail alignment continuing east on bridge structure over the west corner of the Xcel Substation and across Highway 7, matching existing grades at Library Lane and connecting to the existing MN&S alignment between Library Lane and Dakota Avenue. Approximately 800 feet of tangent (i.e., straight) track would be provided between two reversing curves located between the Bass Lake Spur and the existing MN&S. This design adjustment would require full or partial acquisition of approximately 20 residential, business, or public properties and a new structure over Louisiana Avenue and Highway 7. Both Highway 7 and the south frontage road would be lowered to provide the required vertical bridge clearances under the freight rail bridge. This design adjustment would result in undetermined impacts to the Xcel Substation property and facilities. Under this design adjustment, existing at-grade freight rail street crossings would be closed at Walker Street, West Lake Street, 28th Street, and 29th Street. Existing at-grade freight rail crossings at Library Lane and Dakota Avenue would be maintained and a new freight rail bridge would be constructed over 27th Street, with 27th Street becoming a through street. In general, the modified freight rail alignment would connect to the existing MN&S Spur alignment between Library Lane and Dakota Avenue, with relatively minor modifications to the existing freight rail tracks to the north. Those modifications would be made to adjust the profile of the existing freight rail tracks to flatten grades south and north of the existing Minnetonka Boulevard freight rail bridge. Underpasses and overpasses across the freight rail alignment would provide vehicle, bicycle, and pedestrian access at locations where the freight alignment would be elevated (which would entail the construction of retaining walls to support fill where tracks would be raised above existing grade). Finally, there would be a restored freight rail connection constructed between the MN&S Spur and the Wayzata Subdivision, as illustrated in Appendix G, Conceptual Engineering Drawings, of the Draft EIS.

Preparation of the independent report and the development and evaluation of the MN&S North design adjustment utilized an extensive public involvement process that included:[11]

- Availability of the documents online
- Town hall meetings on January 7 and 9, 2014
- Public review and comment period for the draft report that spanned from January 30 to March 12, 2014;
- Studies discussed and reviewed by:
  - BAC (at February 26, 2014 meeting)
  - CAC (at February 27 and March 27, 2014 meetings)
  - CMC (at February 5 and 20; March 12 and 26. 2014 meetings)
- Town hall meetings on February 10 and 12, 2014, to present the findings within, discuss and take comment on the draft independent reports (see Appendix D for instructions on how to view a copy of the presentation made by the preparers of the draft independent reports)

[10] The *Conclusion* at the end of this section and in Table F.5-7 summarizes the Council's evaluation of the MN&S North design adjustment.

[11] This public review and comment process was also used for the *Kenilworth Shallow LRT Tunnels Water Resources Evaluation* (Burns & McDonnell; March 2014).

- Project-sponsored meeting as a part of the issue resolution process described in Section 2.0 of this appendix, which included participation by representatives from affected freight railroads
- Release of the final report on March 21, 2014, which addressed comments received on the draft report.

Shallow LRT Tunnels – Over Kenilworth Lagoon – Variations

At the request of the Minneapolis Parks and Recreation Board (MPRB) in February 2014, the Council developed and evaluated two variations of the Shallow LRT Tunnels – Over Kenilworth Lagoon design adjustment as a part of the fourth step of evaluation in the St. Louis Park/Minneapolis Segment. As previously described in this section, the Shallow LRT Tunnels – Over Kenilworth Lagoon design adjustment would have the light rail alignment cross over the Kenilworth Lagoon on a new bridge, located between the freight rail and trail alignments, connecting the two light rail tunnels. The MPRB asked the Council to develop and evaluate a variation of the design adjustment that would continue the tunnels under the Kenilworth Lagoon, thus avoiding some of the project's long-term impacts to the Kenilworth Lagoon that could result from the new light rail bridge across the lagoon. In response, the Council developed and evaluated two additional design adjustments: (1) Long Shallow LRT Tunnel – Under Kenilworth Lagoon; and (2) Short Shallow LRT Tunnel – Under Kenilworth Lagoon. Under these two design adjustments, construction of the tunnel under the Kenilworth lagoon would be achieved through utilization of the cut-and-cover technique.[12] These designs and their evaluation were presented to MPRB staff and consultants at meetings and through correspondence following their development. Following are descriptions of those two design adjustments:

- **Short Shallow LRT Tunnel – Under Kenilworth Lagoon.** This potential design adjustment would result in a typical cross section of approximately 62 feet for the at-grade freight rail and trail alignments where the double-tracked light rail alignment would be within one tunnel. The light rail tunnel would generally be within the Kenilworth Corridor, with some relatively minor exceptions (see Exhibit F-29). Except at the two tunnel portals and in the vicinity of the Kenilworth Lagoon, the light rail tunnel would be under the reconstructed Kenilworth Trail with about 6 feet to 8 feet of cover above the tunnel measured from existing ground elevation (similar to the Shallow LRT Cut-and-Cover Tunnels adjustment illustrated on Exhibit F-16). The light rail tunnel would extend approximately 3,100 feet from just north of West Lake Street to approximately 400 feet north of the Kenilworth Lagoon. Beneath the lagoon, the tunnel would descend to a depth of cover of approximately 25 feet where the tunnels would cross under the Kenilworth Lagoon (approximately 10 feet from the Kenilworth Lagoon water surface elevation)(in part, the additional depth of the tunnel would be needed to resist long-term buoyancy forces). A portal area at each end of the tunnel would span approximately 300 feet, which would provide for the transition between the at-grade and tunnel alignment. Fencing and other facilities would protect the tunnel portals from unauthorized entry. This design adjustment would not result in any full residential property acquisitions and the proposed 21st Street Station would be retained at-grade.
- **Long Shallow LRT Tunnel – Under Kenilworth Lagoon.** This potential design adjustment would result in a typical cross section of approximately 62 feet for the at-grade freight rail and trail alignments where the double-tracked light rail alignment would be within one tunnel. The light rail tunnel would generally be within the Kenilworth Corridor, with some relatively minor exceptions (see Exhibit F-29). Except at

[12]In addition, project staff developed two variations of the Short and Long Shallow LRT Tunnel – Under Kenilworth Lagoon design adjustments to determine if the northern and southern cut-and-cover LRT tunnel segments could be connected under the Kenilworth Lagoon via a bored tunnel segment, rather than via a cut-and-cover constructed tunnel segment. In effect, these variations would be a combination of two cut-and-cover-constructed tunnel segments connected with a bored-constructed tunnel segment under the Kenilworth Lagoon. In effect, these variations would be a variation of the Kenilworth Deep Bore LRT Tunnel option, with longer cut-and-cover tunnel segments connected to a shorter bored tunnel under the Kenilworth Lagoon. These two combination variations were dismissed from further study due to: 1) complex construction considerations inherent in bored tunnel construction techniques located within a constrained physical environment; 2) additional schedule delays related to bored tunnel construction techniques located within a constrained physical environment; 3) substantially higher capital costs relative to other design adjustments under consideration; 4) potential additional property acquisitions that could be required to accommodate a southern bored-tunnel staging area and temporary freight rail alignments in the vicinity of the construction area; and 5) reconstruction of the existing freight rail and trail bridges across the lagoon and the related long-term and short-term (construction related) adverse impacts would not be avoided.

the two tunnel portals and in the vicinity of the Kenilworth Lagoon, the light rail tunnel would be under the reconstructed Kenilworth Trail with about 6 feet to 8 feet of cover above the tunnel measured from existing ground elevation (similar to the Shallow LRT Cut-and-Cover Tunnels adjustment illustrated on Exhibit F-16). The light rail tunnel would extend approximately 5,800 feet between just north of West Lake Street and approximately 1,000 feet north of 21st Street. Beneath the lagoon, the tunnel would descend to a depth of cover of approximately 25 feet where the tunnels would cross under the Kenilworth Lagoon (approximately 10 feet from the Kenilworth Lagoon water surface elevation)(in part, the additional depth of the tunnel would be needed to resist long-term buoyancy forces). A portal area at each end of the tunnel would span approximately 300 feet, which would provide for the transition between the at-grade and tunnel alignment. Fencing and other facilities would protect the tunnel portals from unauthorized entry. This design adjustment would not result in any full residential property acquisitions.

Exhibits F-30A/B illustrate the general sequence of steps that would be required to construct a light rail tunnel under the Kenilworth Lagoon using the cut-and-cover technique.

Identified Design Adjustments – April 2014

Based on the analysis prepared, committee recommendations, and public comments received during the four-step process described in this section, the Council identified in April 2014 the design adjustments to be incorporated into the LPA: the Shallow LRT Tunnels – Over Kenilworth Lagoon (see Exhibit F-16). In doing so, the MN&S North, the Short Shallow LRT Tunnel – Under Kenilworth Lagoon and the Long Shallow LRT Tunnel – Under Kenilworth Lagoon design adjustments were dismissed from further study (see Tables F.5-2, F.5-7, and F.5-8). The Council found that, relative to the other options considered, the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustment would provide the best balance of costs, benefits, and environmental impacts, and in doing so found that it would best meet the project's Purpose and Need (see Chapter 1 of the Supplemental Draft EIS).

Following is a description of the benefits of the Shallow LRT Tunnels – Over Kenilworth Lagoon design adjustment, compared to the other design adjustments developed and evaluated in the step four evaluation.

- **Shallow LRT Tunnels – Over Kenilworth Lagoon and MN&S North Adjustments.** Table F.5-7 provides a summary of the evaluation measures considered by the Council as it compared the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustment to the MN&S North adjustments. First, the MN&S North adjustments were opposed by the affected freight rail operator (TC&W), primarily based on safety and operational concerns, including three reversing horizontal curves in the proposed freight rail alignment that would be especially problematic (the operator did not express similar concerns about the freight rail alignment that is part of the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustment). In addition, the advantage of the Shallow LRT Tunnels – Over Kenilworth Lagoon, relative to the MN&S North adjustment, is that it would avoid: the potential displacement of approximately six residences and seven businesses and the acquisition of some St. Louis Park High School property; additional cost increases due to project delay of approximately $45 to $50 million; closure of local streets; and extension of the project's construction schedule by up to two years.[13]

[13] Approximately one year of the anticipated delay is for the pursuit of an adverse abandonment with the STB for existing freight rail service on the CP-owned Bass Lake Spur, east of the MN&S Spur, and the HCRRA-owned Kenilworth Corridor. The outcome and actual duration of this process would remain uncertain until conclusion of the process. Approval by STB could require TC&W and CP to cease freight rail operations in the Kenilworth Corridor and relocate those operations from the current location.

EXHIBIT F-28

Short Shallow Cut-and-Cover Tunnel – Under Kenilworth Lagoon

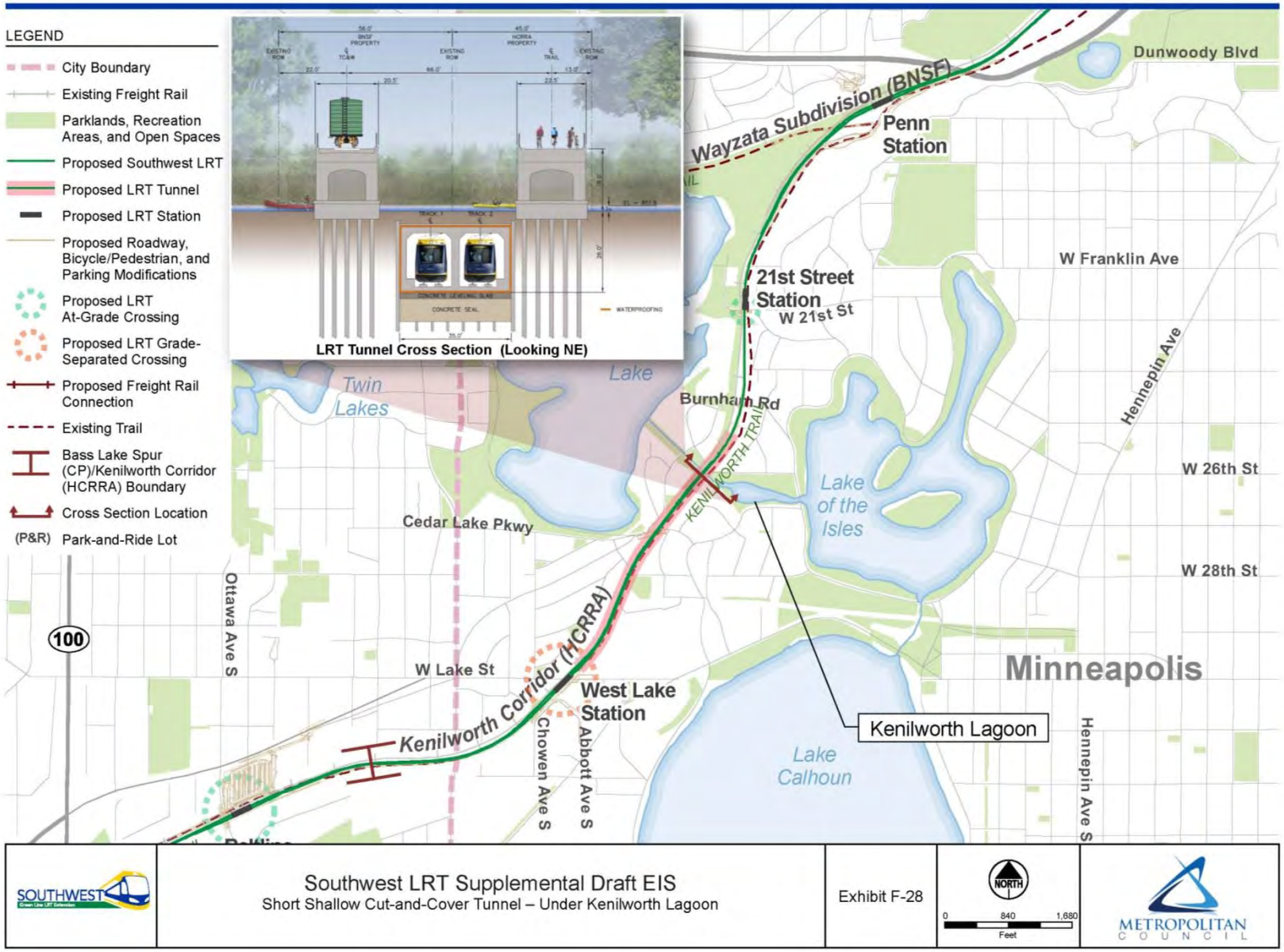


EXHIBIT F-29

Long Shallow Cut-and-Cover Tunnel – Under Kenilworth Lagoon

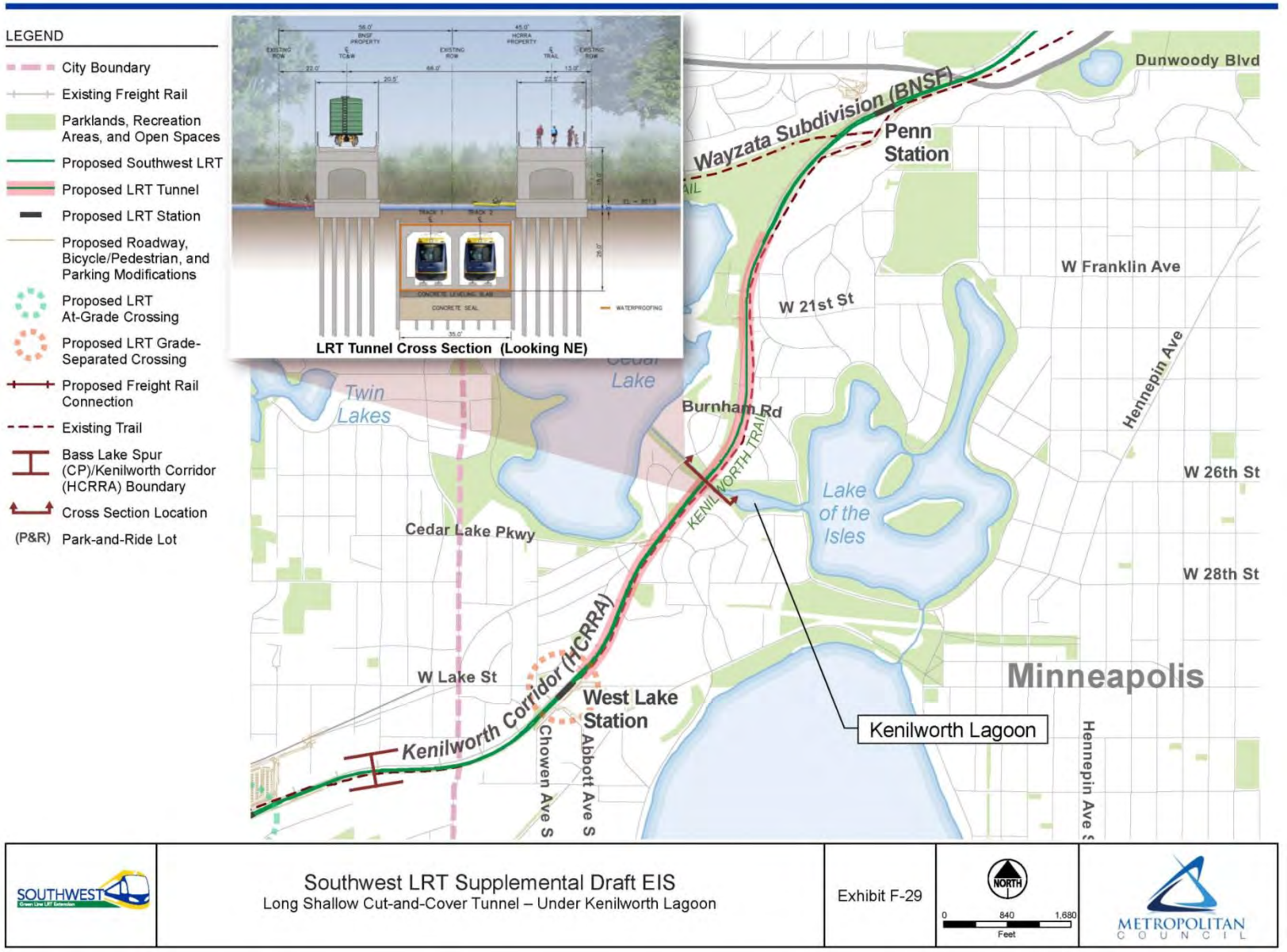
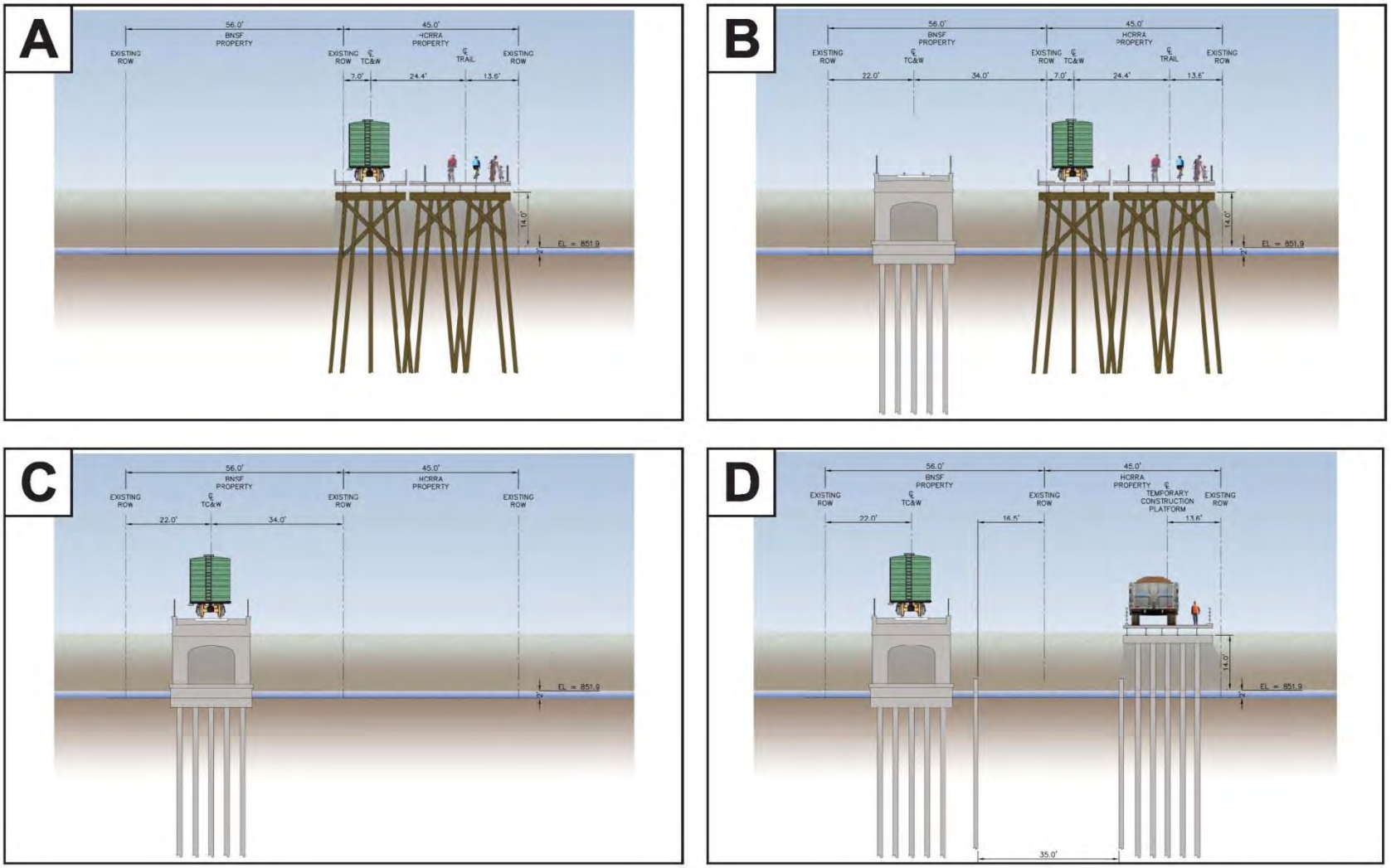


EXHIBIT F-30A

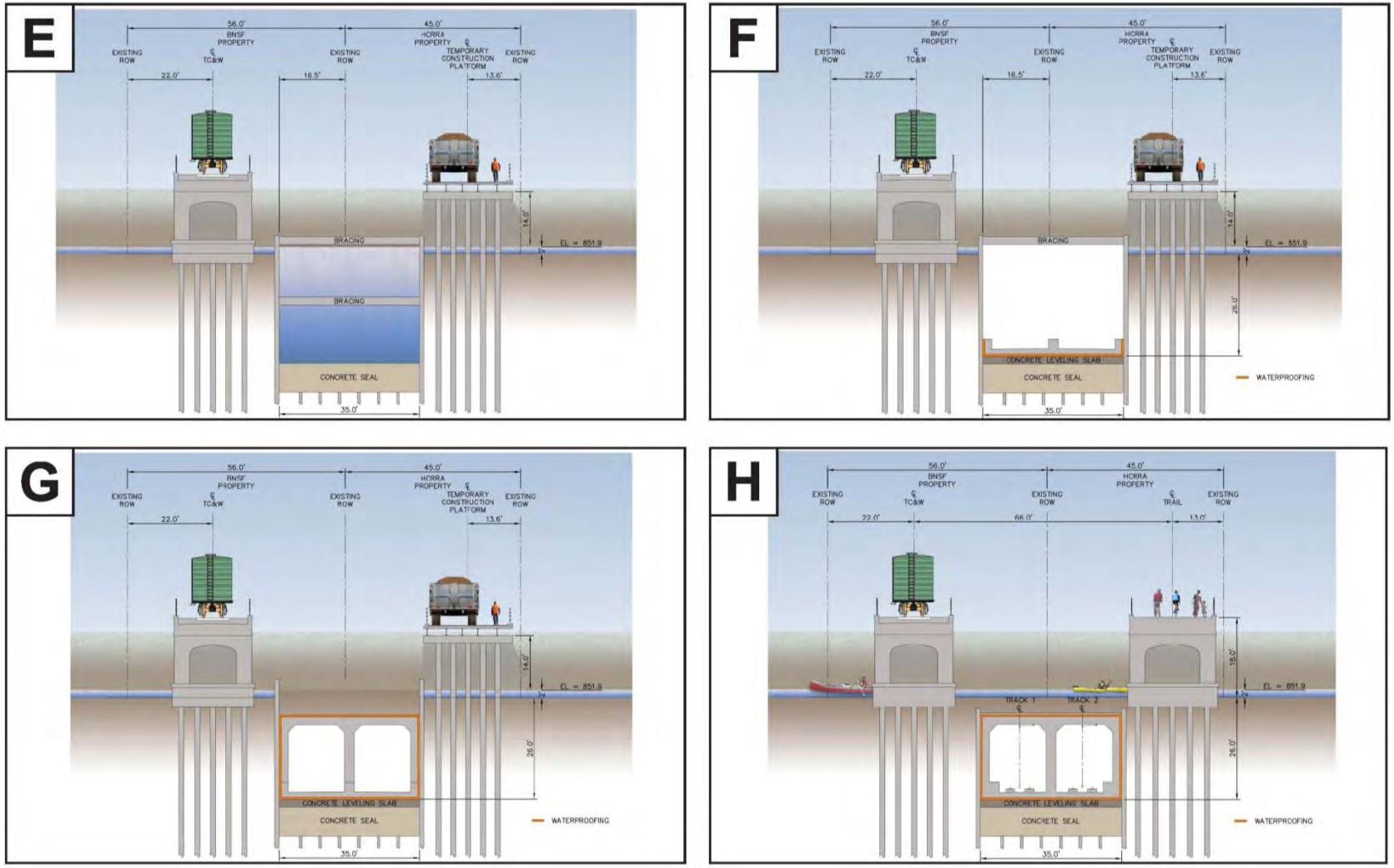
Construction Sequence for the Short/Long Shallow LRT Tunnel – Under Kenilworth Lagoon (at the Kenilworth Lagoon, looking northeast)



SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Construction Sequence for the Short/Long Shallow LRT Tunnel – Under Kenilworth Lagoon (at the Kenilworth Lagoon, looking northeast) St. Louis Park/Minneapolis Segment	Exhibit F-30A	METROPOLITAN COUNCIL

EXHIBIT F-30B

Construction Sequence for the Short/Long Shallow LRT Tunnel – Under Kenilworth Lagoon (at the Kenilworth Lagoon, looking northeast)



SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Construction Sequence for the Short/Long Shallow LRT Tunnel – Under Kenilworth Lagoon (at the Kenilworth Lagoon, looking northeast) St. Louis Park/Minneapolis Segment	Exhibit F-30B	METROPOLITAN COUNCIL

Shallow LRT Tunnels – Over Kenilworth Lagoon; Short Shallow LRT Tunnel – Under Kenilworth Lagoon; and Long Shallow LRT Tunnel – Under Kenilworth Lagoon Adjustments. Table F.5-8 provides a summary of the evaluation measures considered by the Council as it compared the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustment to the two variations that would tunnel under the lagoon. In summary, the advantage of the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustment, relative to the Short Shallow LRT Tunnel – Under Kenilworth Lagoon and the Long Shallow LRT Tunnel – Under Kenilworth Lagoon adjustments, is that it would: avoid closure of recreational traffic on the Kenilworth Lagoon for approximately one additional year; reduce short-term impacts to the Kenilworth Lagoon during construction, including the disruption of existing habitat within and adjacent to the Lagoon and closure of fish passage between Lake of the Isles and Cedar Lake during construction of the tunnel under the Lagoon; reduce long-term impacts to the Kenilworth Lagoon due to its reconstruction; avoid additional construction costs of $30 to $85 million and additional costs due to project delay of $45 to $90 million; and avoid extension of the project's construction schedule by up to one year.

Additional Design Adjustments – July 2014

In July 2014, the Council and the City of Minneapolis proposed a set of additional adjustments to the design of the Shallow LRT Tunnels – Over Kenilworth Lagoon option. The proposed additional design adjustments were outlined in a memorandum of understanding between the Council and the City. (See Appendix D, Sources and References Cited, for instructions on how to access the subsequently executed memorandum). In summary, the proposed additional design adjustments were intended to: (1) reduce project capital costs by eliminating the northern of the two proposed light rail tunnels in the Kenilworth Corridor (including the re-establishment of the proposed at-grade light rail station at West 21st Street) and (2) incorporate into the project a variety of bicycle and pedestrian access improvements associated with proposed light rail stations in the City of Minneapolis. On July 9, 2014, the CMC voted to recommend the additional design adjustments and, considering the recommendation from the CMC, the Council voted to approve the additional design adjustments proposed in the memorandum between the Council and the City of Minneapolis.

The LPA, as evaluated in the Supplemental Draft EIS, reflects the inclusion of the Shallow LRT Tunnel – Over Kenilworth Lagoon and the other light rail-related improvements described in this section as identified by the Council on April 9, 2014, and amended on July 9, 2014 (see Section 2.5, Exhibit 2.5-4, and Appendix G, Conceptual Engineering Drawings of the Supplemental Draft EIS). Other potential light rail-related improvements and freight rail modifications developed and evaluated in this section were removed from further study.

5.2.2 Set 2 Design Adjustments

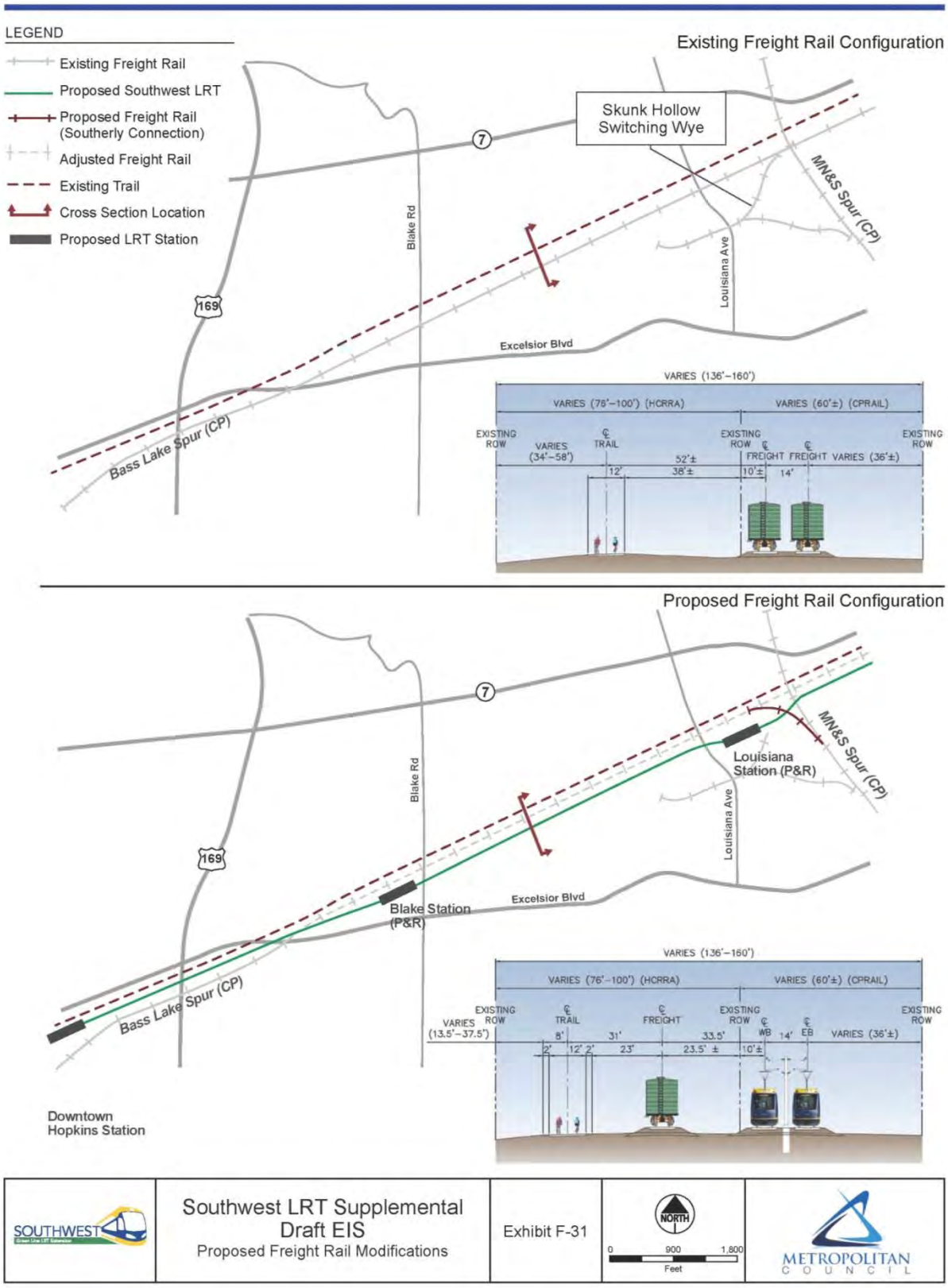
Following is a summary of the Set 2 Adjustments made to LRT3A. As previously noted, these design adjustments, which were approved by the Council in April 2014, were developed and evaluated in a process that paralleled the Set 1 Design Adjustment process. Further, these Set 2 Adjustments and the Set 1 Adjustments have been fully integrated into the revised LPA and they form the basis of the environmental analysis in the Supplemental Draft EIS for the St. Louis Park/Minneapolis Segment.

- **The Freight Rail and Light Rail "Swap" and "Southerly Connection."** In coordination with the cities and affected railroad owners, the project developed and evaluated a design adjustment (i.e., the freight rail and light rail "Swap") that would place the proposed Blake, Louisiana, and Wooddale stations south of a portion of the existing CP freight line (under the Draft EIS conceptual design, those stations would have been located north of the existing CP freight line). The intent of the adjustment is to situate those proposed light rail stations closer to primary existing activity centers and potential development/redevelopment sites, which are predominantly south of the existing freight line. The design adjustment would generally place the proposed light rail alignment and stations within the current freight rail right-of-way, and the freight rail alignment would be moved approximately 45 feet north onto right-of-way currently owned by HCRRA (purchased as future light rail right-of-way and where light rail would have been under the conceptual design of LRT 3A and LRT 3A-1 within Draft EIS). In addition, the Cedar Lake LRT Trail, which is a permitted temporary use within the HCRRA-owned right-of-way north of the existing freight rail alignment, would be reconstructed further north within

that same right-of-way, staying north of the repositioned freight rail alignment. The design adjustment, illustrated on Exhibit F-31, would include a grade-separated crossing of the proposed light rail alignment over the freight rail alignment immediately east of Excelsior Boulevard to permit the freight rail and light rail alignments to swap locations within the corridor. The adjustment also would require the elimination of the northern branch of the Skunk Hollow switching wye and its replacement with the "Southerly Connection" (allowing TC&W trains continued access between the Bass Lake Spur eastbound to the southbound MN&S Spur and the reverse), also illustrated on Exhibit F-31. The Swap would also require the modification of the Cedar Lake LRT Trail at several locations, although continuity of and connections to the trail would be maintained. Further, this would result in the closure of approximately 11,771 feet of freight rail siding track segments, generally between the Downtown Hopkins Station and east of Beltline Boulevard. The Council incorporated the Swap design modification into the LPA in April 2014 because the potential land use and economic development benefits and improved transit access to existing activity centers outweighed its additional cost and adverse environmental impacts, such as the additional moderate visual impacts of the new light rail overcrossing of the freight rail alignment in St. Louis Park.

- **Adjustment to the Location of Louisiana Station.** At the request of the City of St. Louis Park, the project team developed a range of potential design adjustments that would place the proposed Louisiana Station further south than it would have been under the conceptual design of LRT 3A and LRT 3A-1 in the Draft EIS, based on the freight and light rail swap previously discussed. The objective of these proposed design adjustments was to bring the light rail station further south, closer to activity centers North of Excelsior Boulevard. Two general design adjustments were developed and evaluated. The first would place the light rail station approximately halfway between the location of the existing freight rail tracks and Oxford Street. The second would use the north leg of the Skunk Hollow switching wye (to be abandoned and replaced with the Southerly Connection under the freight and light rail swap) to place the Louisiana Station approximately 300 feet north of Louisiana Circle. The second potential design adjustment would also have resulted in abandonment of the south leg of the Skunk Hollow switching wye and relocation of the Robert B. Hill Company salt facility at the end of the switching wye because it would no longer have freight rail access. The Council incorporated the first design refinement into the LPA in April 2014, because of its relatively lower costs and property acquisition needs compared to the second design refinement and because of the potential development and redevelopment benefits of placing a light rail station closer to Oxford Street.
- **Adjustment to the Capacity and Locations of Park-and-Ride Lots.** Based on the City of Minneapolis' comments on the Draft EIS, the project team developed design adjustments that would change the proposed location and capacities of park-and-ride lots in the area included within the St. Louis Park/ Minneapolis Segment. In particular, the City asked that proposed surface park-and-lots be removed from the stations within the City of Minneapolis. Concurrently, to help ensure park-and-ride lot capacity to meet forecast demand in 2030, the project team also developed and evaluated options for increased capacity at the Beltline Station because of its relatively direct automobile access to and from Highway 100 (via Highway 7, Highway 25 and West Lake Street). As a result of the proposed design adjustment, the number of park-and-ride lots in the segment would be reduced from six to two, while the park-and-ride capacity would increase from 650 to 809 spaces, relative to the conceptual design of LRT 3A and LRT 3A-1 in the Draft EIS (see Section 2.3.3 of the Draft EIS). The Council incorporated the design adjustment into the LPA because of the generally improved access between regional highways and proposed park-and-ride lot locations.
- **Bicycle, Pedestrian, and Bus Access Improvements at West Lake and Penn Stations.** Based on the City of Minneapolis' comments on the Draft EIS, the project team developed and evaluated adjustments to the proposed bicycle, pedestrian, and bus facilities at West Lake and Penn stations. The adjustments developed include the addition of vertical circulation connecting the West Lake Station and the West Lake Street bridge and on-street bus transfer facilities on West Lake Street. The adjustments also include grade-separated bicycle and pedestrian connections and improved kiss-and-ride facility at the Penn Station. The Council incorporated the design adjustment into the LPA in April and July 2014 due to the relatively high

EXHIBIT F-31
Proposed Freight Rail Modifications



SOUTHWEST	Southwest LRT Supplemental Draft EIS Proposed Freight Rail Modifications	Exhibit F-31	NORTH 0 900 1,800 Feet	METROPOLITAN COUNCIL

level of projected ridership at the two stations and the improved access that the adjustments would provide to walk-on and bus-transfer riders. See Appendix G, Conceptual Engineering Drawings, for additional detail.

6.0 Locally Requested Capital Investments (LRCI)

The stakeholder cities and County of the Southwest LRT project, including Eden Prairie, Minnetonka, Hopkins, St. Louis Park, and Hennepin County have each gone through their respective local planning and decision making processes to identify improvements they propose to be undertaken separate from, but contingent upon, implementation of the Southwest LRT project (hereinafter referred to as Locally Requested Capital Investments [LRCIs]). These proposed activities are not needed to support the base function of the Southwest LRT project, nor do they represent mitigation by FTA or the Council for any impact of the Southwest LRT project. These proposed activities may be implemented independently by the stakeholder cities at a future date, and are not conditions of the Southwest LRT project. If constructed by the LRT contractor, the construction documents will clearly separate out the LRCI activities and costs. This would be a requirement of the FTA to document the costs, and application of the Capital Investment Grant (CIG) Program.. Each of the proposed LRCI's would not diminish or directly enhance the performance of the Southwest LRT project.

The proposed LRCI's are currently anticipated to be funded in full by the respective local agencies. The costs of implementing the proposed LRCIs are currently not part of the CIG Program for which the Council is requesting funding from the FTA. At the time this Supplemental Draft EIS was prepared, sources of funds to finance the construction of the proposed LRCIs had not been finalized.

The Supplemental Draft EIS outlines the proposed LRCI actions identified by each of the cities and Hennepin County, through which the Southwest LRT project is proposed to operate. The preliminary LRCI list was presented to the Corridor Management Committee (CMC) in October 2014 and an updated preliminary list was presented to the Executive Change Control Board (ECCB) in December 2014. Each of the proposed LRCIs that advance through the city and county decision making processes will undergo detailed impact evaluation, with results reported in the Final EIS. The current list of proposed LRCIs are not anticipated to result in significant adverse impacts.

TABLE F.6-1
Locally Requested Capital Investments

Requestor	ID#	Description
Locally Requested Capital Investments: Eden Prairie and Hennepin County		
Eden Prairie	1	New north-south road from Town Center Station to Singletree Lane
Eden Prairie	2	New trail from Golden Triangle Station south to connect to existing trail to Valley View Road
Eden Prairie	3	New trail from Prairie Center Drive and the Highway 212 off-ramp to Southwest Station
Eden Prairie	4	Tapered, tubular catenary poles throughout Eden Prairie
Eden Prairie	5	Decorative street lighting in Town Center area and along Technology Drive west of Prairie Center Drive

Requestor	ID#	Description
Eden Prairie	6	Upgraded fencing and bridge railings
Eden Prairie	7	Planter boxes and walls adjacent to alignment in Town Center area and from Southwest Station to Mitchell Station
Eden Prairie	8	Upgraded bridge aesthetics at Prairie Center Drive, Valley View Road, and Shady Oak Road/Highway 212
Eden Prairie	9	Embedded track from Town Center to Eden Road/Glen Road intersection
Eden Prairie	10	Public plazas at stations
Eden Prairie	11	Technology Drive extension
Hennepin Co.	26	New trail between LRT track and CSAH 61 from Technology Drive to Valley View Road
Locally Requested Capital Investments: Minnetonka, Hopkins and Hennepin County		
Minnetonka	12	Extension of 17th Avenue from Shady Oak Station south to K-Tel Drive (includes necessary utility connections)
Minnetonka	13	Accommodation of potential future infill station at Smetana Road (includes platform foundation and direct fixation track)
Hopkins	14	Water main and sanitary sewer under 17th Avenue
Hopkins	16	New pedestrian lighting along the trail alignment from Jackson Avenue to Blake Road
Hennepin Co.	28	Grade separated trail crossing at Blake Road
Locally Requested Capital Investments: St. Louis Park and Hennepin County		
St. Louis Park	17	Xenwood Avenue underpass near Wooddale Station
St. Louis Park	19	Circulation and access improvements at Beltline Station
St. Louis Park	32	Beltline Boulevard/CSAH 25 circulation and access improvements
St. Louis Park	33	New trail from Louisiana Station to Brunswick Ave. S
Hennepin County	29	Grade separated trail crossing at Wooddale Avenue
Hennepin County	30	Grade separated trail crossing at Beltline Boulevard

Exhibit F-32
Locations of Locally Requested Capital Investments in Eden Prairie

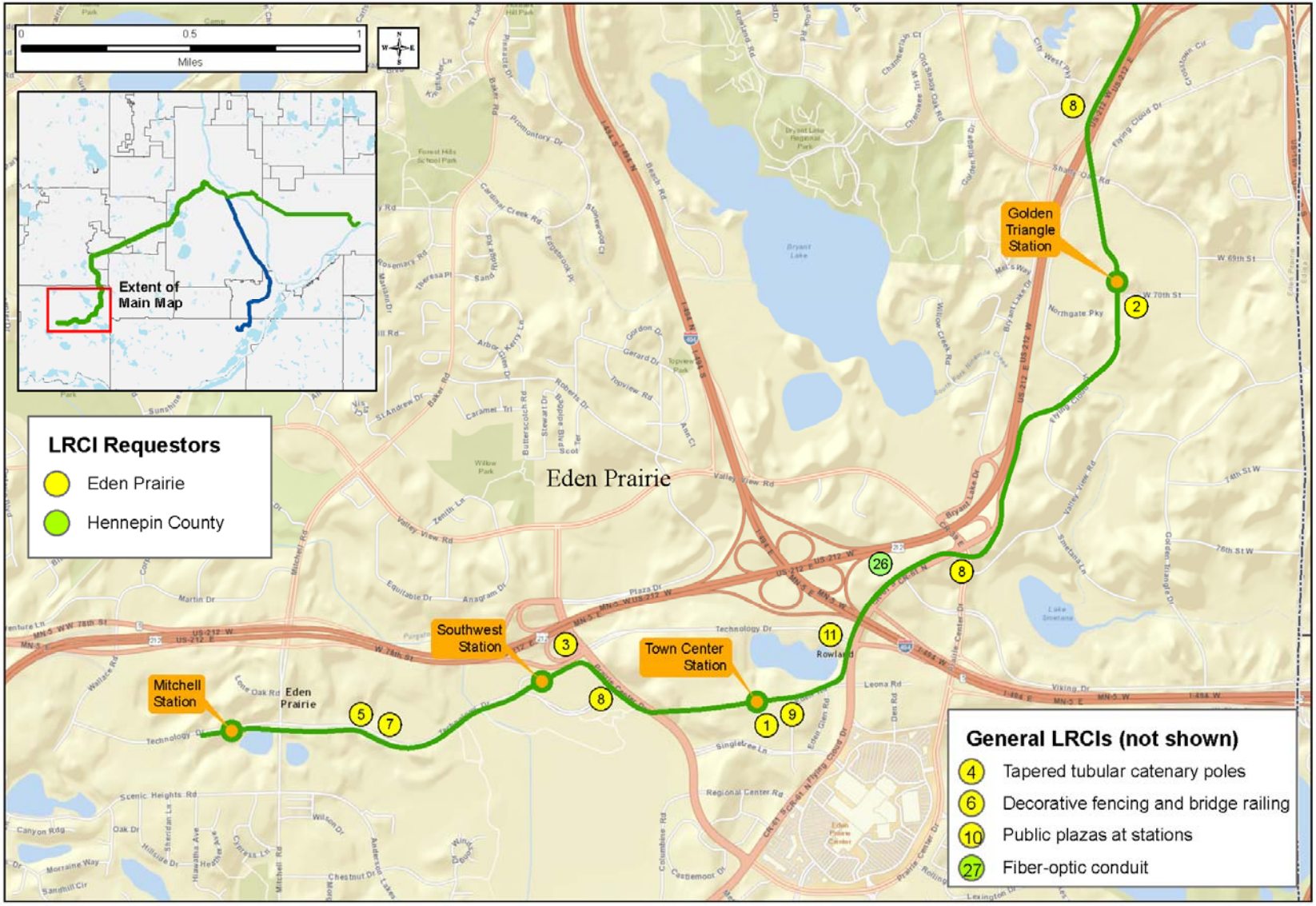


Exhibit F-33
Locations of Locally Requested Capital Investments in Minnetonka and Hopkins

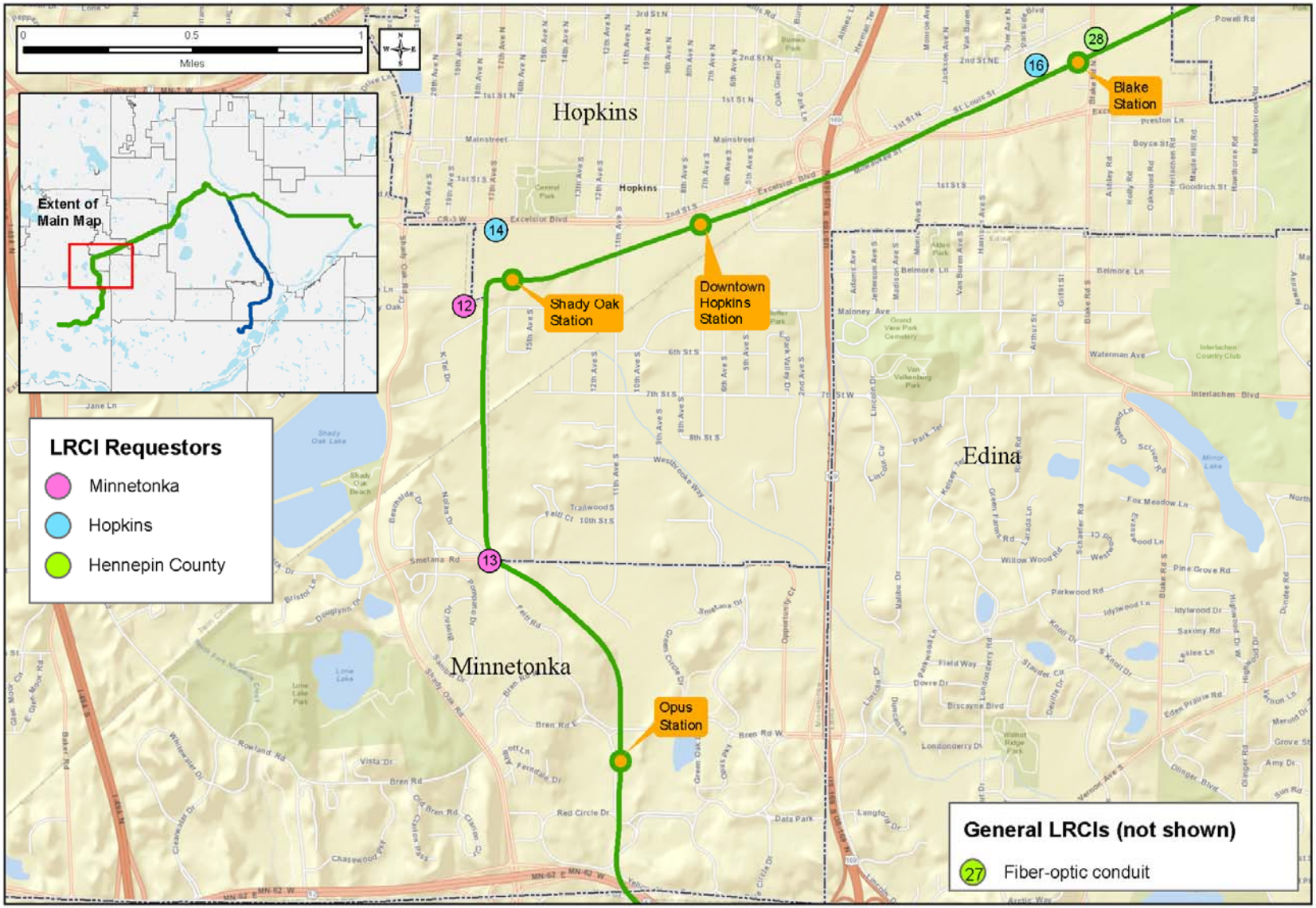
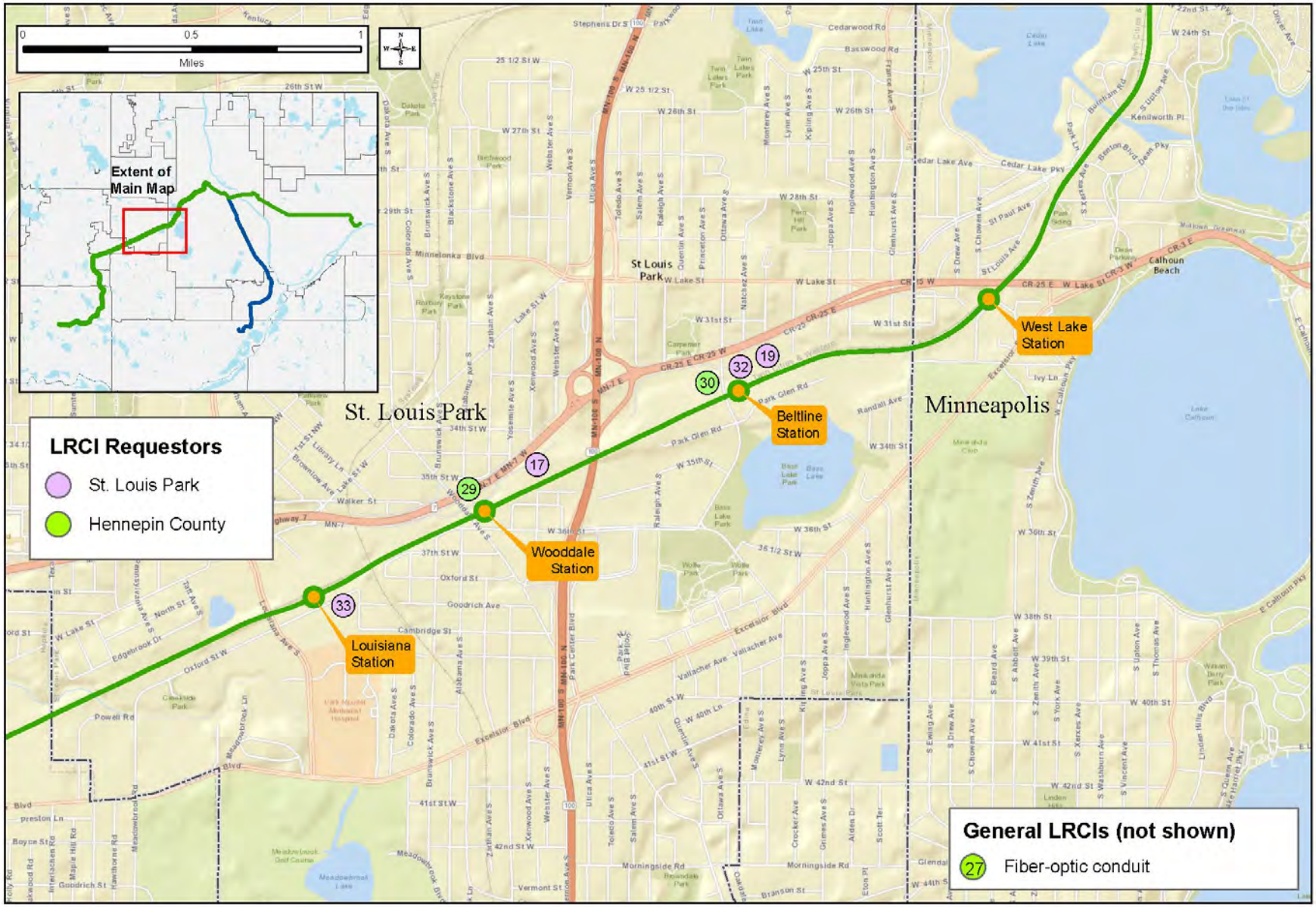


Exhibit F-34
Locations of Locally Requested Capital Investments in St. Louis Park



Appendix G
Supplemental Draft EIS Conceptual Engineering Drawings

SOUTHWEST LRT

Eden Prairie Segment

Locally Preferred Alternative

COLOR	LEGEND
LRT TRACK AREA	RETAINING WALL
PEDESTRIAN / SIDEWALK AREA	SIGNALIZED INTERSECTION
STATION PLATFORM	TRACTION POWER SUBSTATION (GENERAL AREA)
TUNNEL	SIGNAL BUNGALOW (GENERAL AREA)
ROADWAY	GATE ARM
TRAIL / BIKEWAY	TOTAL PROPERTY ACQUISITION
SURFACE PARKING	PARTIAL PROPERTY ACQUISITION
BRIDGE	RIGHT OF WAY
	PROPERTY LINE

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1/16/2015
Sheet 1 of 5

NORTH

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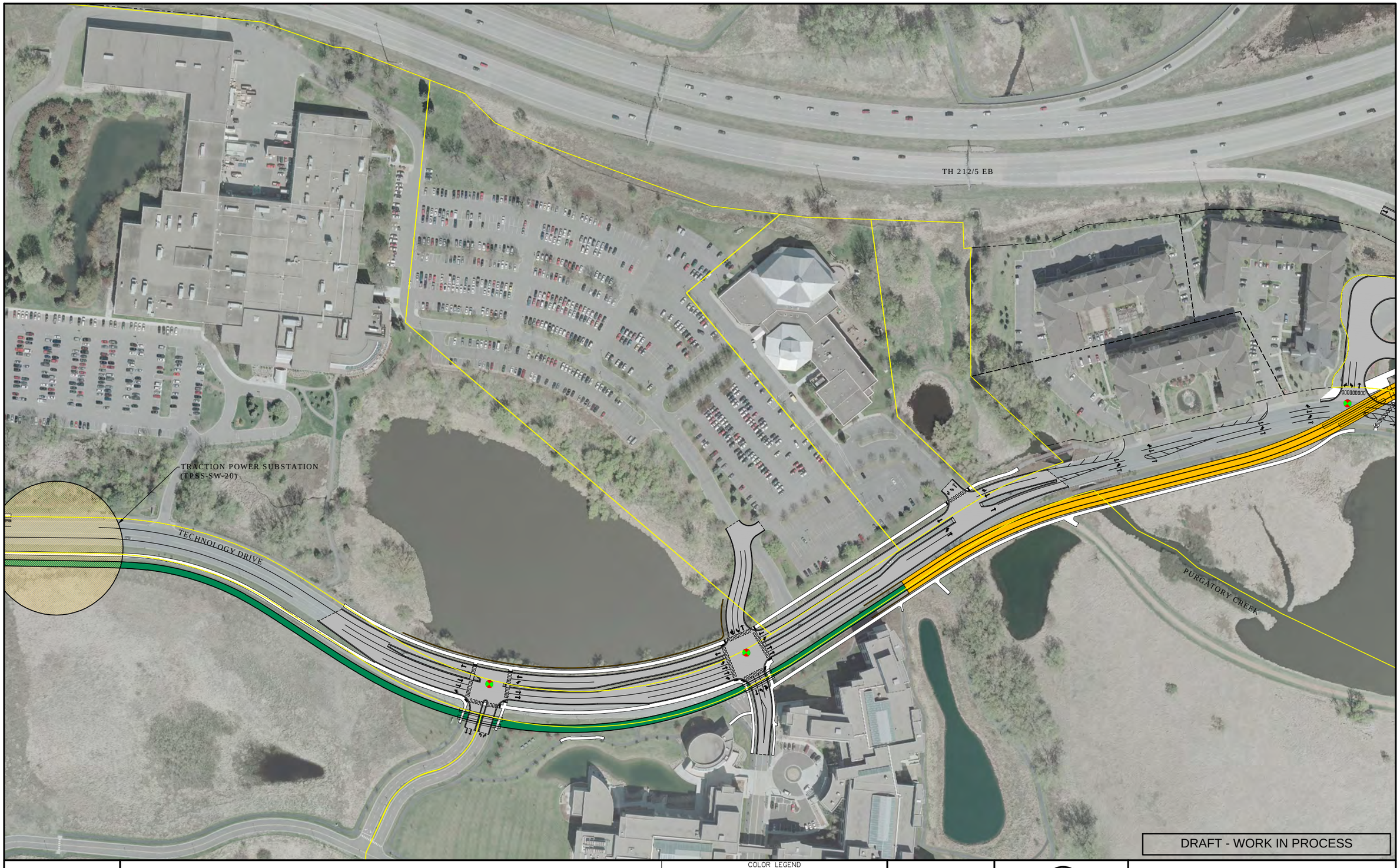
Scale



SOUTHWEST LRT

Eden Prairie Segment

Locally Preferred Alternative

COLOR LEGEND	
LRT TRACK AREA	RETAINING WALL
PEDESTRIAN / SIDEWALK AREA	SIGNALIZED INTERSECTION
STATION PLATFORM	TRACTION POWER SUBSTATION (GENERAL AREA)
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SURFACE PARKING	PARTIAL PROPERTY ACQUISITION
BRIDGE	RIGHT OF WAY
	PROPERTY LINE

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TECHNOLOGY DRIVE

TRACTION POWER SUBSTATION
(TPSS-SW-19)

SIGNAL BUNGALOW

PRAIRIE CENTER DRIVE

SOUTHWEST TRANSIT BUS STATION

SOUTHWEST STATION

SOUTHWEST STATION

SWLRT PARK AND RIDE AND KISS AND RIDE STRUCTURE 3 LEVELS

SOUTHWEST TRANSIT

TECHNOLOGY DRIVE

PURGATORY CREEK PARK

PURGATORY CREEK

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SOUTHWEST LRT

Eden Prairie Segment

Locally Preferred Alternative

COLOR LEGEND

LRT TRACK AREA	RETAINING WALL
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ROADWAY	GATE ARM
TRAIL / BIKEWAY	TOTAL PROPERTY ACQUISITION
SURFACE PARKING	PARTIAL PROPERTY ACQUISITION
BRIDGE	RIGHT OF WAY
	PROPERTY LINE

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SOUTHWEST LRT

Eden Prairie Segment

Locally Preferred Alternative

COLOR LEGEND

LRT TRACK AREA	RETAINING WALL
PEDESTRIAN / SIDEWALK AREA	SIGNALIZED INTERSECTION
STATION PLATFORM	TRACTION POWER SUBSTATION (GENERAL AREA)
TUNNEL	SIGNAL BUNGALOW (GENERAL AREA)
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TRAIL / BIKEWAY	TOTAL PROPERTY ACQUISITION
SURFACE PARKING	PARTIAL PROPERTY ACQUISITION
BRIDGE	RIGHT OF WAY
	PROPERTY LINE

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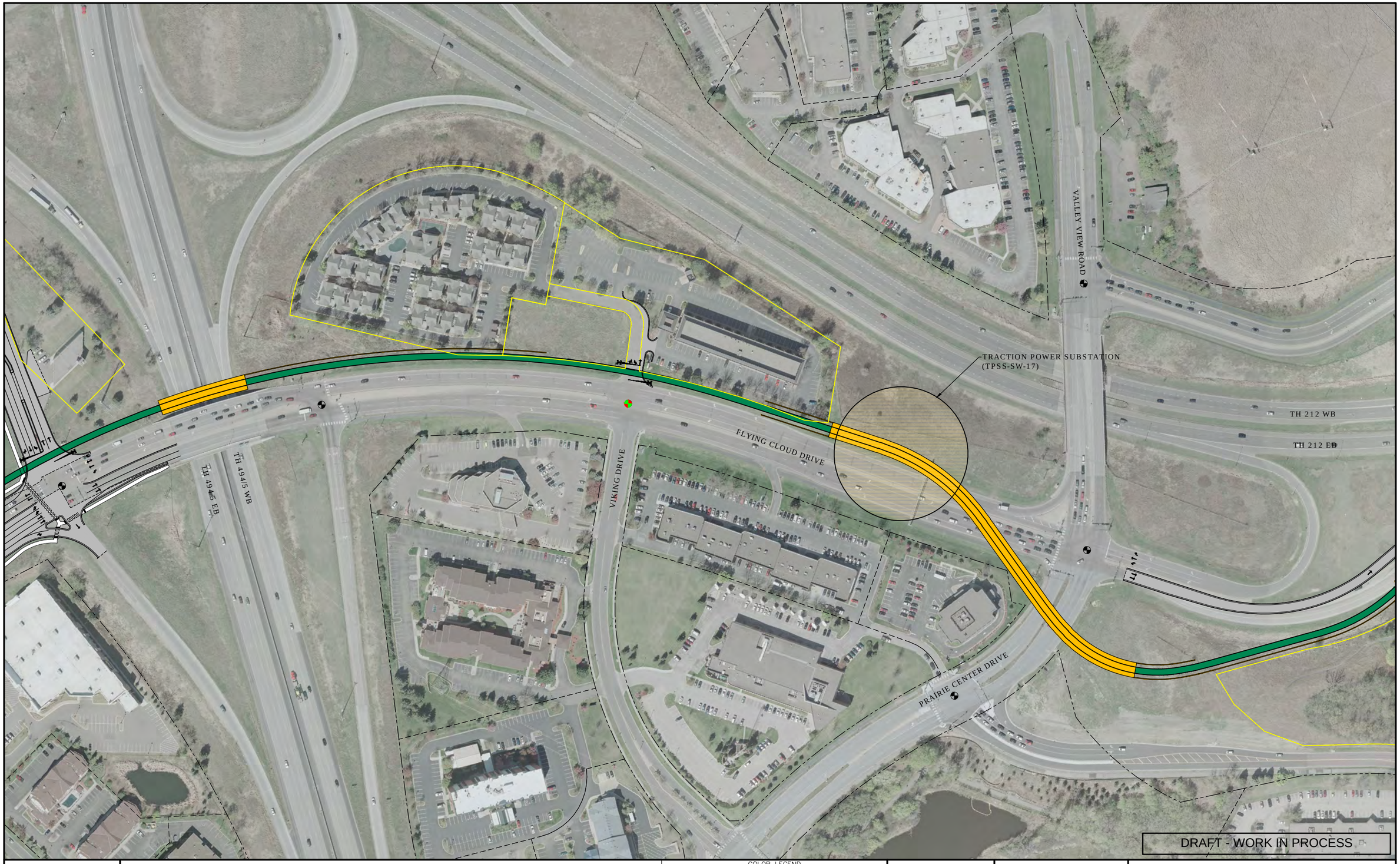

SOUTHWEST LRT

Eden Prairie Segment

Locally Preferred Alternative

COLOR LEGEND	
LRT TRACK AREA	RETAINING WALL
PEDESTRIAN / SIDEWALK AREA	SIGNALIZED INTERSECTION
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BRIDGE	RIGHT OF WAY
	PROPERTY LINE

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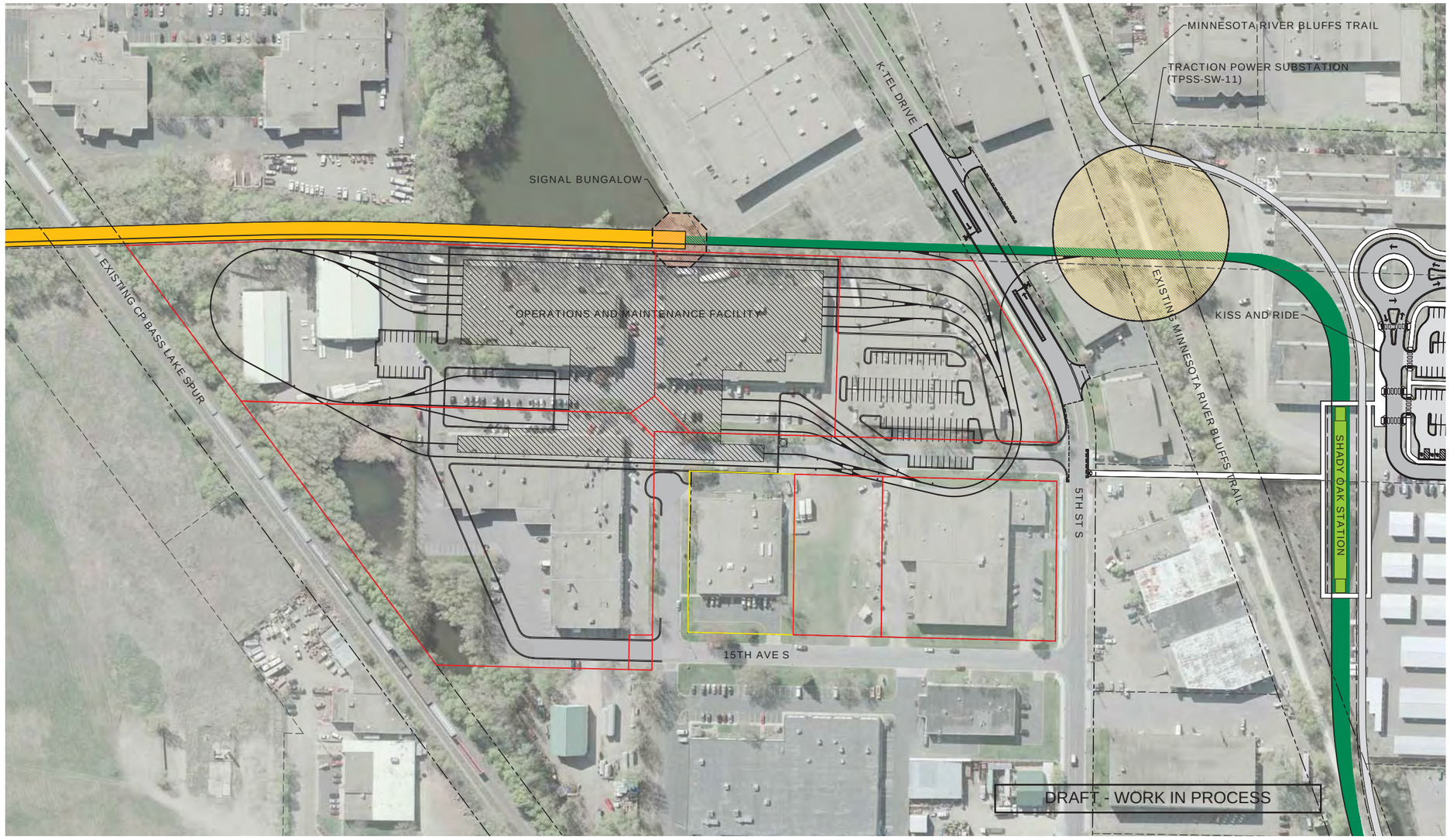

SOUTHWEST LRT

Hopkins Operations & Maintenance Facility

Locally Preferred Alternative

COLOR LEGEND	
LRT TRACK AREA	RETAINING WALL
PEDESTRIAN / SIDEWALK AREA	SIGNALIZED INTERSECTION
STATION PLATFORM	TRACTION POWER SUBSTATION (GENERAL AREA)
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SURFACE PARKING	PARTIAL PROPERTY ACQUISITION
BRIDGE	RIGHT OF WAY
	PROPERTY LINE

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Scale

SOUTHWEST LRT

St. Louis Park/Minneapolis Segment
Locally Preferred Alternative

COLOR LEGEND

LRT TRACK AREA	EXISTING SIGNALIZED INTERSECTION
PEDESTRIAN / SIDEWALK AREA	PROPOSED SIGNALIZED INTERSECTION
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SURFACE PARKING	PARTIAL PROPERTY ACQUISITION
BRIDGE	RIGHT OF WAY
RETAINING WALL	PROPERTY LINE

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REALIGNED FREIGHT

CEDAR LAKE TRAIL

LOUISIANA STATION

RAILROAD AVE

W 37TH ST

OXFORD ST

KISS AND RIDE

TRACTION POWER SUBSTATION (TPSS-SW-07)

PARK AND RIDE

LOUISIANA AVE S

EDGEWOOD AVE S

SOUTHERLY CONNECTOR

OXFORD ST

COLORADO AVE S

DRAFT - WORK IN PROCESS

SOUTHWEST LRT

St. Louis Park/Minneapolis Segment

Locally Preferred Alternative

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BRIDGE	RIGHT OF WAY
RETAINING WALL	PROPERTY LINE

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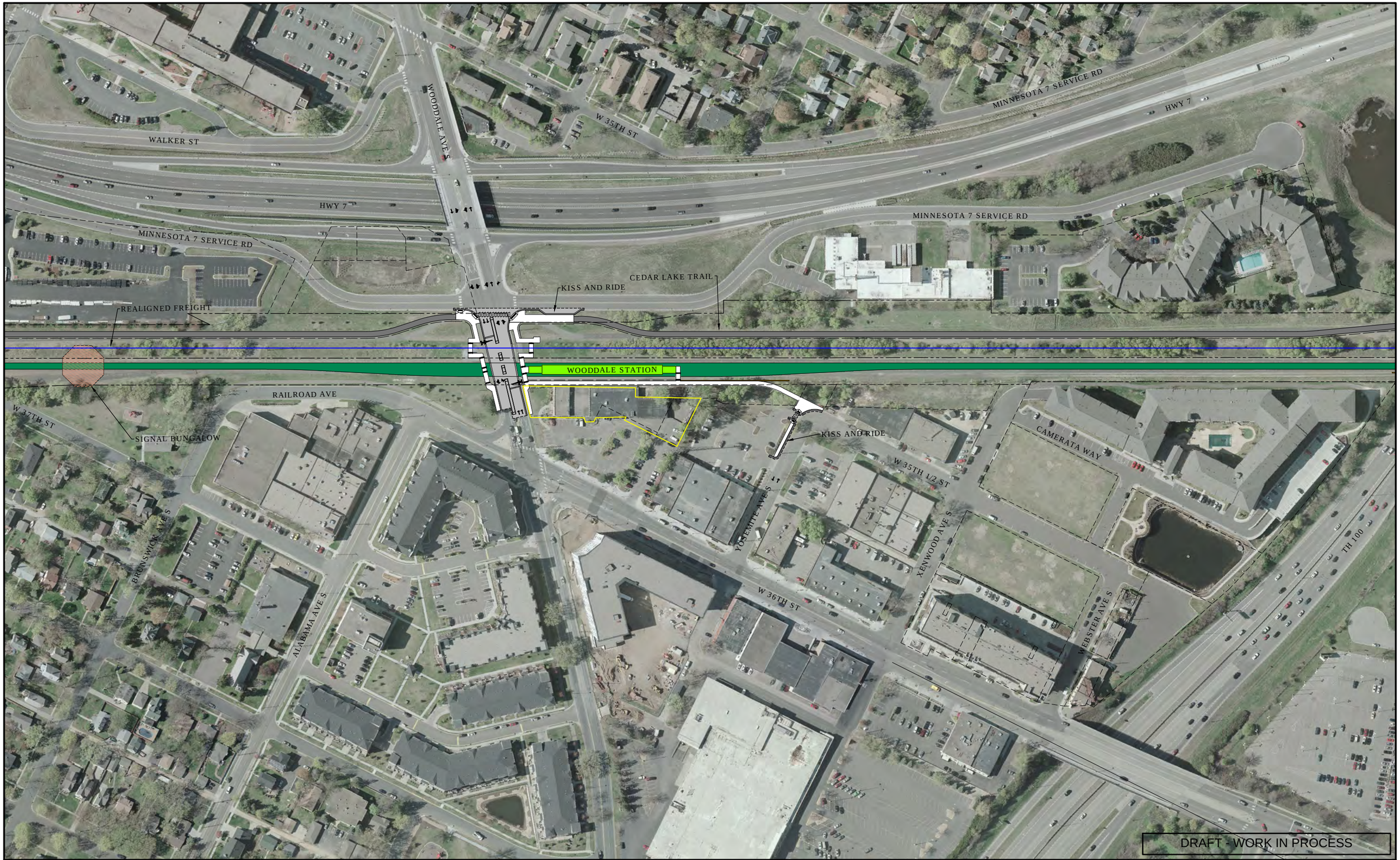

SOUTHWEST LRT

St. Louis Park/Minneapolis Segment

Locally Preferred Alternative

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RETAINING WALL	PROPERTY LINE

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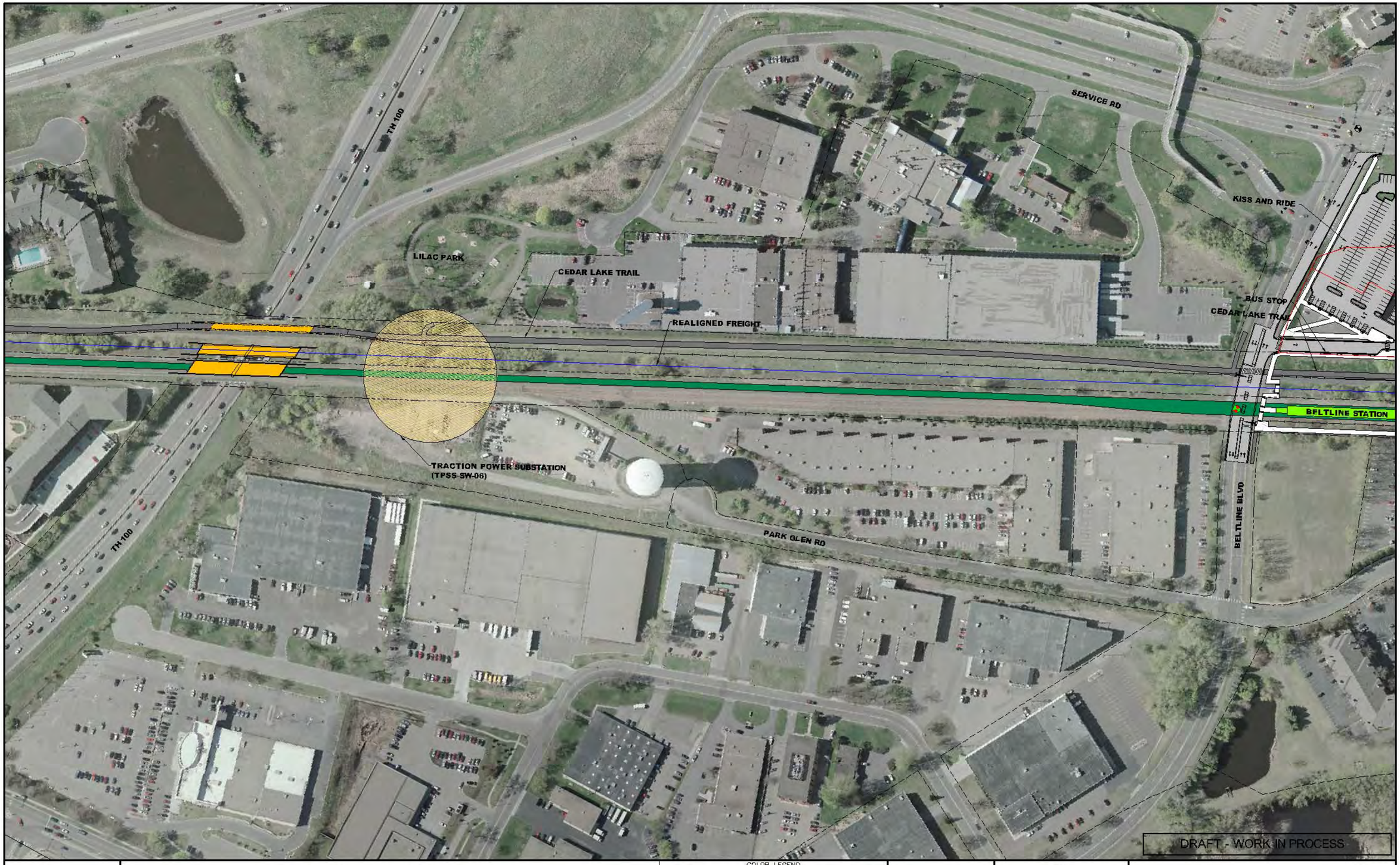

SOUTHWEST LRT

St. Louis Park/Minneapolis Segment

Locally Preferred Alternative

COLOR LEGEND

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RETAINING WALL	PROPERTY LINE

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Sheet 4 of 9

NORTH

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Scale

SOUTHWEST LRT

St. Louis Park/Minneapolis Segment

Locally Preferred Alternative

COLOR LEGEND

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Scale

SOUTHWEST LRT

St. Louis Park/Minneapolis Segment
Locally Preferred Alternative

COLOR LEGEND

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BRIDGE	RIGHT OF WAY
RETAINING WALL	PROPERTY LINE

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SOUTHWEST LRT

St. Louis Park/Minneapolis Segment
Locally Preferred Alternative

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NORTH

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Scale

SOUTHWEST LRT

St. Louis Park/Minneapolis Segment
Locally Preferred Alternative

COLOR LEGEND	
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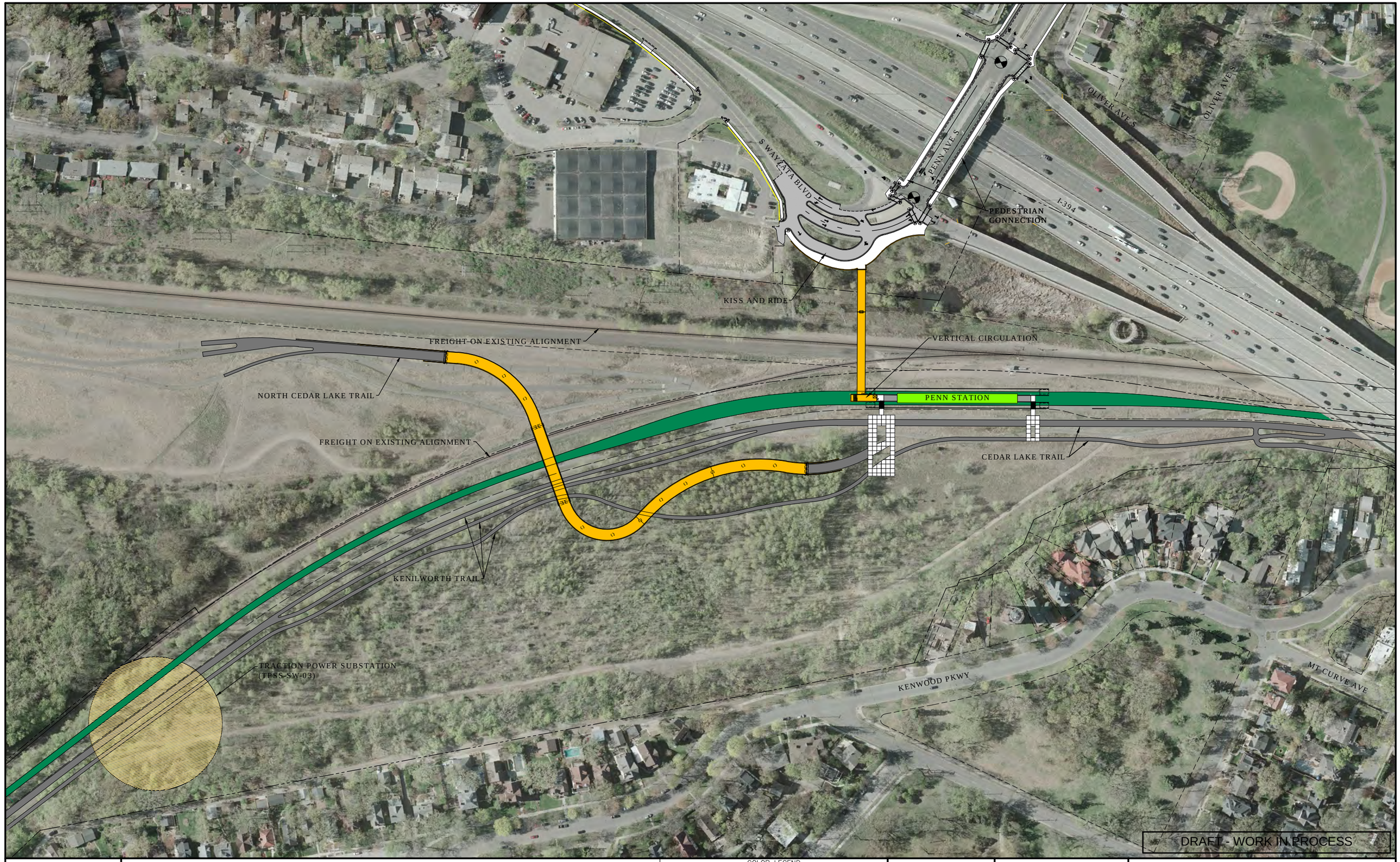

SOUTHWEST LRT

St. Louis Park/Minneapolis Segment

Locally Preferred Alternative

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Rev 00.00
8/5/2014
Sheet 9a of 9

NORTH

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Scale

SOUTHWEST LRT

St. Louis Park/Minneapolis Segment

Locally Preferred Alternative

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Rev 00.00
8/5/2014
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NORTH

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Scale